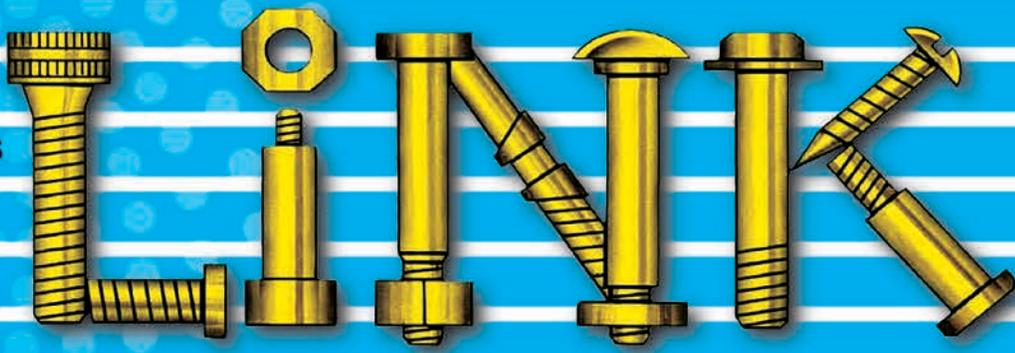


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Subject: Breakthrough; Expand-A-Lock

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Leo J. Coar
EDITOR & PUBLISHER
leojoar@linkmagazine.com



Tracey Lumia
SALES & MARKETING DIRECTOR
tracey@linkmagazine.com

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Rotor Clip USA and **Rotor Clip Ltd.** are now formally certified to IATF 16949:2016, the new automotive standard replacing the previous one known as TS16949 .

Rotor Clip is proud to be among the first 50 companies in the world to pass the IATF 16949 audit.

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* * * * *

Kerr Lakeside Inc. announces the promotion of Alex Kerr to Vice-President and General Manager. Alex represents the fourth generation of Kerr family members to participate in executive management of the company. He is following in the footsteps of his great grandfather Charles L. Kerr, grandfather Richard W. Kerr and father Charles L. Kerr II.

Prior to joining the company in 2015, Alex worked as a commercial airline pilot flying the Embraer 145 for Republic Airlines and received a



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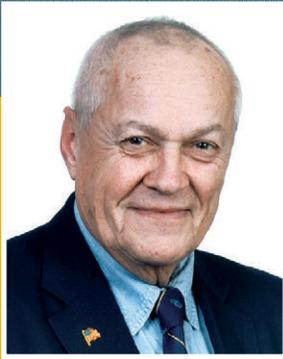
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Bengt Blendulf

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.

SELECTING FASTENERS FOR HIGH WORK LOADS WITH HIGH SERVICE LEVELS

In previous articles we have looked at the types of joints that can be described as "Low Work Load" attachments. If the purpose of a screwed/bolted joint is just to keep the parts in place and not to absorb any significant external forces, fasteners with relatively low strength can be used. But, it is important that we keep manufacturing costs in mind since even low-cost fasteners may still require high assembly expenses. The In-Place-Cost (IPC) should always be an important part of our decision making in selecting the best fastener for the job. The IPC approach is equally valid when we are dealing with bolted/screwed joints that are subjected to higher external forces. However, economical consequences of joint failures often overshadow assembly costs when a highly stressed joint fails in service causing personal injuries and/or property damages.

In my engineering classes on Fastening Technology and Bolted/Screwed Joint Design (FTB) I recommend that the approach to decision making should be made in the following order:

- [1] Joint geometry
- [2] Magnitude and direction of forces
- [3] Materials in joint parts and fasteners
- [4] Temperatures at assembly and service
- [5] Tightening methods (initial and service)
- [6] Fastener selection
- [7] Accessories (sealing, prevailing torque, etc.)

As you can see from this list, the actual picking of a fastener is way down on the list. The reason for this is that if the designer does not have a really good grasp on the items 1-5, he/she will choose the fasteners by using

some level of guess-work. The two areas where I find the highest level of uncertainty among design engineers are items 2 and 5. We can't always know the exact size or magnitude of an external force (item 2) hitting the bolted/screwed joint, but we must at least make a reasonable well founded assumption if we can't actually measure it. The other "weakness" area is how we assume that we tighten the joint (item 5) at the initial assembly and when performing maintenance work on the joint in service. If we assign a tension scatter range in our calculation that is different from what the actual tool can produce, we may break the fastener when tightening or getting the wrong preload. So, we need to do some serious homework before selecting our fasteners and the method of tightening we are going to use.

What kinds of fasteners would be good candidates for the "High Work Load/High Service Level"? We must, of course, consider the fastener types that are typically manufactured in higher strength classes (grades) and having driving geometries suitable for applying high tightening torque levels. There must also be a balance between the force created by the clamping fastener and the capability of the joint material to handle the pressures under screw head and/or nut without getting permanent deformation (embedment). For example – if we use a Class 8.8 (Grade 5) screw to assemble two pieces of plastic, we can't even use 10 % of the fastener strength without causing permanent damage to the plastic parts.

I guess that we have already made up our minds as to the kinds of fasteners that would fit in this "high" strength level category.



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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.

WHY FASTENERS FAIL PART 4 - MANUFACTURING DEFECTS

In Part's One through Three of this series we have looked at how fasteners fail once they have been placed into service. This has included looking at immediate failures by overload and delayed failures as a result of progressive mechanisms like fatigue, creep and corrosion. In this final installment we will investigate the role that manufacturing defects play in fastener failure. In this segment we will not only consider failures that result in product failure but also those that prevent a part from being assembled. Although failures of this type can be categorized primarily as nuisances, they are still failures and should be considered as such.

In this segment we will consider manufacturing defects that fall into three primary categories; 1. Manufacturing defects that fail on installation or may lead to progressive failures (such as fatigue), 2. Manufacturing defects which prevent assembly, and, 3. Manufacturing defects that are simply a nuisance. Although these categories seem to suggest a sliding scale relative to defectiveness, the reality is that any problem with renders the part incapable of being used for its intended purpose should be considered equally bad.

Manufacturing Defects Which May Lead to Immediate or Progressive Failures

Cracks

Cracks are perhaps the biggest nemesis of manufacturers and users alike. They can be completely benign but unsightly or nearly invisible yet a lurking,

malevolent presence. Once discovered it is rare for any crack to be accepted by the end user, often for good reasons, not the least of which is the fact that cracks are potential sources of disaster in applications exposed to fatigue loading.

To appreciate the genesis of cracks, one must first consider how fastener parts are made. Whether cold, warm, or hot formed, the process of transforming a part from a simple cylindrical tube into a complicated series of coaxially connected shapes, often with internally formed holes or complex geometric recesses, involves extreme forming forces at exceptionally high strain rates. (Strain rate refers to the speed at which the deformation occurs.) These conditions place exceptional instantaneous stresses on the subject parts. If the raw material is incapable of accepting such stress or has inherent weaknesses present, the material will seek to find a way to relieve itself, normally in the form of a crack.

Cracks may be generated from an inherent weakness or flaw present in the raw material. These cracks are usually relatively easy to spot and diagnose because the contributing defect will be evident along the entire length of the part rather than localized to just the cracked area. These sorts of cracks are almost always longitudinal, running along the axis of the part and result from either a seam, lap, or scratch in the raw material. Figure 1 shows a part exhibiting this type of crack. Note that the defect is evident running the entire length of the part, although it only opened up in the form of a crack in the highly stressed area of the head.

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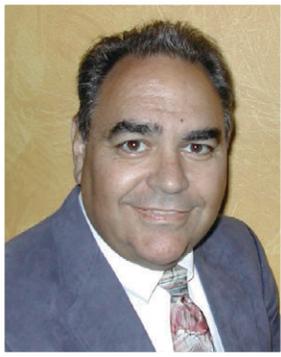
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Guy Avellon

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 SPRING WASHERS

The Belleville washer is known by several names, such as; a compression washer, conical spring, conical compression washer, spring disc, or the most common, the Belleville spring washer. The washer is named after Julien Francois Belleville, who was granted a patent in 1861. Even so, little is known about how it is used and its existence is often forgotten.

The Belleville spring is conical in shape. Being a spring, it will compress at a given rate producing very high loads in a very small space that are constant during periods of joint relaxation which will help keep the joint together. The Belleville washer is very advantageous when multiple factors are involved, such as with thermal expansion, softer materials, dissimilar metals, gasketed joints and with multiple bolts. Depending on materials and strength, they may be used in critical and non-critical applications.

Some of the available materials range from high carbon 1075 steel, 6150 alloy steel, 301 and 17-7PH stainless steels and H-13 tool steel. Inconel X-750 and X-718 are also used. Spring material choice is based on application, environment and operating temperatures.

The Belleville spring washer is designed to prevent loosening from a variety of factors, such as vibration, embedment relaxation into softer materials and / or thread flanks, bolt creep, stress relaxation, thermal expansion and relaxation as well as elastic interaction.

From prior discussions, we know that a fastener will lose between 10-15% of its initial preload just from normal relaxation soon after it is tightened. In a multiple bolting connection, adjacent fasteners can lose over 50% on solid joints and over 75% with a gasketed connection

due to an elastic interaction between the fasteners, even if criss-cross torquing is used. This is because when the second bolt is tightened, it further compresses the joint and allows the first bolt to relax and so on with the other bolts in the connection. However, cross torquing helps but loads will still change in flanges under pressure and temperature variables.

Bolt creep and stress relaxation happens when the joint experiences elevated temperatures. During this steady high temperature exposure, the bolt will relax over a period of time. Creep is the amount of tension loss the bolt experiences, which is a factor of the bolt material, temperature and the time exposed to that temperature.

Differential thermal expansion happens when the joint heats up from the thermal resistance experienced in an electrical connector, friction from compressed air or fluids flowing through pipes and from heated fluids conducting heat in flanges and connectors. Thermal conductivity will cause expansion of the parts closest to the heat source. These parts will naturally expand faster than parts further away.

When parts cool, they all cool at different rates, which depends upon the material and the temperatures. For instance, in an electrical connection there is either aluminum or copper. Each will expand faster than the steel bolt, unless it is bronze. When the heat source stops, the aluminum and copper will cool and contract faster than the steel bolt, causing a loose joint. During this time when the joint is loose, the joint can leak until parts expand again and the nut is susceptible to loosening. Electric bus bars are very susceptible to thermal loosening.



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Richard Hagan

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

FASTENER COMPANY ACQUISITIONS COMPLETED DURING THE SECOND HALF OF 2017

In this issue, we will briefly review all the fastener company acquisitions - a total of 27 worldwide - completed during the second half of 2017. See the Fall 2017 issue of Distributor's Link (page 24) for the acquisitions completed during the first half of 2017.

It is impossible to track every single fastener company transaction because many deals involving private companies are not publicly disclosed. That said, we believe the following list is the most comprehensive and detailed you will find.

Year	Total Number of Deals Completed
2017	49
2016	49
2015	47
2014	41
2013	29
2012	35
2011	29
2010	30
2009	14
2008	24

With a total of forty-nine transactions consummated during 2017, fastener industry deal-making remained very strong compared to recent years.



On July 3, 2017, **NORMA Group SE** purchased an 80% equity stake in **Fengfan Fastener Co. Limited** ("Fengfan Fastener"). Founded in 1988 and headquartered in Shaoxing City, China, Fengfan Fastener is a manufacturer of cable ties, straps & buckles and specialty fire-resistant textiles made from stainless steel, plastic, nylon and other specialty materials. The company utilizes injection molding, casting, stamping and cutting processes in production. Fengfan Fastener employs around

190 people and generated net sales of approximately €15 million (US\$17.7 million) in calendar 2016. Headquartered near Frankfurt, Germany, NORMA Group (Frankfurt Stock Exchange: NOEJ) develops and manufactures a broad range of clamps, connectors, fittings and joining products for companies and applications around the globe. The company operates 28 production facilities across Europe, Asia and the Americas and employs around 6,700 people worldwide. In calendar 2016, NORMA Group generated net sales of €895 million (US\$1.05 billion).

Purchase price: not available



On July 12, 2017, **Bolts & Nuts Corporation** purchased **Industrial Fastening of Macon LLC** ("IFM"). Founded in 2012 and located in Macon, Georgia, IFM is a distributor of fasteners and Class C components, supplying OEM and MRO customers concentrated in central Georgia. Founded in 1979 and headquartered in Chattanooga, Tennessee, Bolts & Nuts is a full service distributor of fasteners and Class C components, providing advanced supply chain management services to a diverse range of OEM and MRO customers. Bolts & Nuts operates six branches in: Macon, Georgia; Mocksville, North Carolina; Louisville, Kentucky; Chicago, Illinois; Lincoln, Nebraska; and Hayward, California. Following the transaction closing, it is expected that the operations of IFM will be consolidated with Bolts & Nuts' existing branch located in Macon. Bolts & Nuts is owned by Nebraska Heavy Industries LLC, a Lincoln, Nebraska-based investment company.

Purchase price: not available

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EXOTIC



STAINLESS STEEL 17-4 PH

- 17-4 PH, also known as Alloy 630, is a chromium-copper stainless steel that provides an outstanding combination of high strength and good corrosion resistance at temperatures up to 527°F.
- Resists atmospheric corrosion and diluted acid salts where its corrosion resistance is equivalent to Alloy 304 Stainless Steel.
- A higher strength stainless steel is used for fasteners, fittings, valves and shafts.
- DFARS and RoHS Compliant. Mildly magnetic.

STAINLESS STEEL A286

- Type A286, also known as Grade 660 Super Alloy, is an iron-nickel-chromium alloy with addition of molybdenum and titanium. A286 is a popular oil and gas industry material. This grade is suitable for applications requiring good corrosion resistance and strength in temperatures up to 1300°F.
- Resists salt water, acids, chlorides, alkalis and other industrial solvents.
- High-strength material used for fasteners, sockets, exhaust parts, engine blades and shafts.
- DFARS and RoHS Compliant. Nonmagnetic.

STAINLESS STEEL 316 HIGH FIVE™ (AMPG 316H5)

- High Five Stainless is our higher strength grade of 316 stainless steel with equivalent corrosion resistance. Strain-hardened parts have the same chemistry as their non-strain-hardened counter parts.
- AMPG 316H5 offers excellent corrosion-resistance that is required in the food industry, and any applications with exposure to salt water.
- Corrosion-resistance material with strength equivalent to Grade 5 steel materials.
- May be mildly magnetic.

MANUFACTURING CAPABILITIES: Shoulder Screws | Socket Screws | Nuts | Washers | Binding Posts | Pins

ALLOYS



NICKEL ALLOY 405 (MONEL)

- Nickel (Monel), aka nickel-copper alloy, is a higher-strength material.
- Excellent resistance in corrosive environments: sea water, some acids, alkalis.
- Marine industry material used for propellers, heat exchangers and valves.
- May be mildly magnetic.

TITANIUM GRADE 2

- Titanium Grade 2 is best known for being strong, lightweight and corrosion resistant.
- Resists chlorides, hypochlorites, chlorates, perchlorates and chlorine dioxide.
- Lightweight material used for chemical-processing equipment, heat exchangers and fasteners.
- Nonmagnetic.

TITANIUM GRADE 5

- Titanium Grade 5 is two times stronger than Grade 2, and four times stronger than 316 stainless at nearly half the weight.
- Resists chlorides, hypochlorites, chlorates, perchlorates and chlorine dioxide.
- Lightweight material used for higher-strength fasteners, racing components and marine hardware.
- Nonmagnetic.



Learn more at AMPG.COM or call **317.472.9000**

...continued, page 18

EXOTIC ALLOYS

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YOUR CUSTOMERS WANT THEM, BUT CAN'T WAIT 8 WEEKS OR 6 MONTHS

“ ‘I’m in a real bind. What can you do for me?’— A customer pleads for help.
‘I need it yesterday’ — A customer asking for a solution.
‘18-8 isn’t strong enough for this job – what’s strong and corrosion resistant?’ ”

The most common corrosion resistant fasteners are made from 18-8 Stainless – a material first patented in 1872, and produced in commercial form in the early 1900’s. Today there’s a demand for better and stronger materials, different from 18-8 Stainless.

For Distributors this can be a problem, since exotic alloy fasteners are not as available as standard 18-8 materials, and need to be custom ordered. Some of the largest Importers do stock the most common sizes in exotics, but when they run out of stock, their lead time is measured in months, and the products of course are not domestic. There are domestic hot and cold headers that do stock as well, but when they run out they require large quantities and typically 8-12 weeks to produce.

Does new technology, such as 3D printing, offer a viable substitute?

A lot is being written about 3D printing being a disruptive technology for traditional machining methods. The ability to go from print to part in a few hours, and being able to make one part is what

makes this technology appealing. 3D printers convert a digital file into many “slices” and deposit either plastic, resin, or metal from the bottom up, adding layer upon layer until the part is fully formed. While printing one part on a 3D printer that uses plastics or resins may take 3 hours, metal printing systems take far longer. While this may be a fast solution in the future, with the current technology it’s not a very good solution, especially for producing in the exotic metals your customers require.

Flexible Manufacturing, How AMPG Competes

At AMPG, we have developed flexible methods and technologies that give us a “3D printing ability” on our Star Swiss Production Lathes. We can and do set up and run one piece or 120 average length pieces in 2 hours. That’s faster than 3D, and they are real parts - superior mechanically and cosmetically. Automatic Bar Fed Swiss Lathes that we use at AMPG can beat 3D printing for speed, and the raw material is superior to an additive process.



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AMPG specializes in Stainless Steels and High-Performance Exotic Materials

AMPG manufactures and stocks the largest line of hard-to-find fasteners in the industry. Utilizing only brand new and late model CNC Swiss Lathes, most parts are manufactured in one chucking and come off complete, avoiding the traditional inconsistencies and out of tolerance conditions introduced by secondary operations.

The advanced production equipment, measuring processes organized to our ISO 9001:2015 certification, and the deep knowledge of our manufacturing staff ensure that parts are produced quickly with tight tolerances from the beginning to the end of each lot. Our parts look different because they are different. The first piece and the last piece made are identical. That's why most companies that use the Star Swiss Lathes that we deploy are making bone screws for the medical markets.

Over the years, we have worked hard to keep pace with customers' product requests for higher-performance materials. High-performance materials that are resistant to extreme corrosion, industrial chemicals, surface wear, galling, high temperatures, as well as alloys that offer higher strength properties, lightweight properties or a combination of these.

AMPG customers can be found in many different types of industries such as oil and gas, pulp and paper, marine, chemical and many other industries where standard fasteners simply can't do the job. Often the solution is designing and manufacturing custom parts in these exotic alloys.

The following raw materials are part of the stock AMPG maintains to process parts quickly:

Multi-Purpose Materials

- Corrosion-Resistant Type 303 Stainless Steel (18-8, A2-70)
- Super Corrosion-Resistant Type 316 Stainless Steel (A4-70)
- Wear-Resistant Type 416 Stainless Steel
- Lightweight 6061 Aluminum
- Corrosion-Resistant 360 Brass
- General Purpose 12L14 Low Carbon Steel
- High-Strength 4140 Alloy Steel
- High-Strength 1144 Stressproof Alloy Steel

High-Performance Exotic Materials

- Super Corrosion-Resistant High-Strength AMPG 316H5 Stainless Steel (A4-80)
- High-Strength Corrosion-Resistant 17-4PH Stainless Steel (Alloy 630)
- High-Temperature High-Strength A286 Stainless Steel (Alloy 660)
- Super Chemical-Resistant 405 Monel (Nickel Alloy)
- Lightweight Super Corrosion-Resistant Grade 2 Titanium
- High Strength Super Corrosion-Resistant Grade 5 Titanium

We keep the following exotic alloys on our floor:



AMPG 316H5™ STAINLESS STEEL

AMPG 316H5 is our trademarked line of Strain-Hardened Type 316 stainless steel – Made in the USA of DFARS and RoHS compliant material. Our product lines made in this stainless have all of the corrosion resistance of Type 316 stainless steel, but are work hardened at the mill to have the strength properties of a Grade 5 material. This AMPG 316H5 has the same chemistry as their non-strain-hardened, weaker counterparts. All the same great corrosion resistance, but much stronger.

Applications abound in food processing, marine, construction, chemical plants, and anywhere a higher strength fastener is required.

Strength properties are functionally equivalent to the A4-80 materials used in Europe. To our knowledge this is the first time that this superior stainless material will be available from stock as a finished product line.

AMPG is stocking Shoulder Screws, Socket & Hex Cap Screws, Flange Nuts, Hex Nuts and Flat Washers.



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17-4 PH STAINLESS STEEL

Also known as Alloy 630, 17-4PH is a chromium-copper stainless steel that provides an outstanding combination of high strength and good corrosion resistance at temperatures up to 527°F.

Corrosion resistance is equivalent to Alloy 304 Stainless Steel for atmospheric corrosion and diluted acid salts corrosion. Our 17-4 PH is DFARS and RoHS compliant, and may be mildly magnetic.

We stock these finished product lines:

- Shoulder Screws
- Socket Head Cap Screws
- Low Head Socket Caps
- 82 Degree Flat Head Socket Screws
- Flange Socket Head Prairie Bolts
- Hex Nuts
- Flat Washers

Bar Stock is on hand for quick delivery of custom and standard items.



A286 STAINLESS STEEL

Type A286, also known as Grade 660 Super Alloy is an iron-nickel-chromium alloy with addition of molybdenum and titanium. A286 is a popular oil & gas industry material. This grade is suitable for applications requiring good corrosion resistance and strength in temperatures up to 1300°F. It resists salt water, acids, chlorides, alkalis and other industrial solvents, and is a high-strength material used for fasteners, sockets, exhaust parts, engine blades and shafts. Our A286 material is DFARS & RoHS Compliant. Nonmagnetic.

This material is extremely hard to work, and we have acquired new technology that allows us to put

any type of drive in the head – from a Phillips drive to 6 Lobe with Pin, or a custom shape as well.

We stock these finished product lines:

- 6 Lobe Button Head Machine Screws
- 6 Lobe Flat Head Socket Caps

Bar Stock is on hand for quick delivery of custom and standard items.



GRADE 405 MONEL (Nickel Alloy)

This is a higher strength material with excellent corrosion resistance in corrosive environments - sea water, some acids and alkalies.

Extensively used in the marine industry, especially when paired with 316 stainless hardware to reduce the chance of galling. May be mildly magnetic.

We stock Shoulder Screws, Socket Caps, and Hex Nuts.



TITANIUM – GRADE 2 AND GRADE 5

Grade 2 is a strong lightweight and corrosion resistant alloy, and is used in many fasteners. Grade 5 is twice as strong as Grade 2, and four times stronger than regular 316 Stainless Steel, at nearly half of the weight. Used for higher-strength fasteners, racing and marine components. Both are nonmagnetic.

We stock raw material and make Shoulder Screws, Socket & Hex Cap Screws, Nuts, Spacers and Washers from Grade 2 and Grade 5 Titanium.

Print to Part in 7 days

We can produce production quantity orders within 7 days from the signed print. We keep a tremendous inventory of bar stock in our facility to be able to start manufacturing immediately.

A Place for Hard-to-Find Fasteners

Since 1987, AMPG has been manufacturing and stocking non-standard and hard-to-find fasteners. In the last 5 years our technical capability and speed of production has advanced so quickly that we say that “We design parts today and produce them tomorrow”.

AMPG inventories over 35,000 items in our Indianapolis warehouse. New products are the lifeblood of the business, and we have a long term strategic plan in place to introduce thousands of new products each and every year. We are a flexible organization which allows us to change our manufacturing schedule multiple times per day. With over 26 pieces of automated production equipment, we have the mind set and the production capacity to change daily.

For Distributors looking to help their customers, here's why AMPG is the right choice:

- AMPG leads the industry in manufacturing hard-to-find fastener solutions.
- Print to Part in 7 days - We can produce production quantity orders within 7 days from the signed print.
- AMPG offers assistance with product design and engineering.
- Our Indianapolis facility maintains a tremendous inventory of bar stock allowing for immediate manufacturing.
- All raw material is purchased and certified to ASTM specifications.
- Our ISO 9001:2015 system ensures our control processes are streamlined.
- All raw material is DFARS compliant and lot traceable.
- We are committed to providing our customers with RoHS compliant products. The majority of parts made by AMPG are compliant with the current European hazardous substances directive.
- Our compliance department is prepared to help customers with any technical questions.
- We're proud to be an American manufacturer.

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Joe Dysart

Joe Dysart is an Internet speaker and business consultant based in Thousand Oaks, California. A journalist for 20 years, his articles have appeared in more than 40 publications, including The New York Times and The Financial Times of London. During the past decade, his work has focused exclusively on ecommerce.

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

THEY DID IT: THE FREE AND OPEN INTERNET IS DEAD FOR FASTENER DISTRIBUTORS

While most Americans were rushing around last December, grabbing last-minute gifts for the holidays, the FCC voted to drive a stake in the heart of the free and open Internet.

In a majority vote, the agency killed Net Neutrality – a policy that has prevented your regional ISP from becoming the gatekeeper between you and all the Internet has to offer.

In essence, the new FCC rules, slated for official publication in the Federal Register in early 2018, enables the ISPs of fastener distributors – such as Verizon, Comcast or Cablevision – to start charging them extra to use Facebook, extra to ensure their business Web sites download quickly and extra for all sorts of other information and services they currently get for free.

“Once again, the Trump administration has sided with Big Money and against the interests of the American people,” says U.S. Senator Bernie Sanders. “The FCC’s vote to end Net Neutrality is an egregious attack on our democracy.

“With this decision, the Internet and its free exchange of information as we have come to know it will cease to exist.

“The end of Net Neutrality protections means that the

Internet will be for sale to the highest bidder, instead of everyone having the same access regardless of whether they are rich or poor, a big corporation or small business,

a multimedia conglomerate or a small online publication.”

FCC’s Chairman Ajit Pai fiercely disagrees, countering that the death of Net Neutrality will instead usher in a wave of new Internet infrastructure development, along with the emergence of more ISPs, which will rise to compete aggressively for customer dollars in numerous regional markets – a win-win for consumers.

“Broadband providers will have stronger incentives to build networks, especially in unserved areas, and to upgrade networks to gigabit speeds and 5G,” Pai wrote in his public statement on the agency’s new stance (http://transition.fcc.gov/Daily_Releases/Daily_Business/2017/db1214/DOC-348261A2.pdf).

“This means there will be more competition among

broadband providers.” Adds U.S. House Speaker Paul Ryan (R-WI): “The Trump administration’s action to roll back this egregious government overreach into the most innovative space will benefit all users of the internet.”

Noble words, for sure.



“ONCE AGAIN, THE TRUMP ADMINISTRATION HAS SIDED WITH BIG MONEY AND AGAINST THE INTERESTS OF THE AMERICAN PEOPLE,” SAYS U.S. SENATOR BERNIE SANDERS.



“THE TRUMP ADMINISTRATION’S ACTION TO ROLL BACK THIS EGREGIOUS GOVERNMENT OVERREACH INTO THE MOST INNOVATIVE SPACE WILL BENEFIT ALL USERS OF THE INTERNET,” SAYS U.S. HOUSE SPEAKER PAUL RYAN.

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Long recognized as a leading producer of customized fasteners and hardware, Alpha Grainger Manufacturing also stocks a wide array of standard parts that are ready to ship and priced competitively.

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HYDROGEN EMBRITTELEMENT IN FASTENERS CASE STUDIES - PART 2

This is the second 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 study and three other articles I have written on the subject for the Distributor's Link Magazine.

In our previous case study we had a situation in which there was no real hydrogen embrittlement in the product, but because of lack of process control and specification knowledge the supplier and the end user suffered some pain. It was not significant and the outcome was positive for all involved.

This current case also involves lack of specification understanding, however it involves real hydrogen embrittlement where the consequences were severe. It serves as an excellent illustration of why end users and suppliers should have a thorough understanding of the fastener and coating specifications they are working with. In the end, we will use this study to help you understand two important plating specifications and how to make informed decisions regarding their use.

CASE NUMBER 2: Subsea Oil Rig Bolting and Zinc Plating Specifications

Over the past 5 years or so there have been a series of bolting failures in subsea oil drilling equipment. The investigations, repair of the failures, bolting replacement worldwide and the associated drilling rig downtime cost many millions of dollars, not to mention the environmental impact, which fortunately has been minimal. BSEE, the Bureau of Safety and Environmental Enforcement

and API, the American Petroleum Institute, along with other organizations have been at the front of these investigations.

Hydrogen embrittlement was identified as the cause of failure in some of these cases. While experts agree that hydrogen embrittlement was indeed involved, the type of hydrogen embrittlement and the root cause of these failures is still a subject of controversy. When the root cause of any failure is elusive or not properly identified, applying an effective preventive action is not possible.

In at least one case of this subsea bolting, the hydrogen embrittlement was attributed to the fact that the bolts were zinc plated and not properly baked according to the plating specification used, ASTM B633. When hydrogen embrittlement occurs under these conditions it is called internal hydrogen embrittlement. Baking the parts for some amount of time, a few hours to 24 hours or more, is the prescribed method to drive out the hydrogen and prevent hydrogen embrittlement from occurring. Many experts, reports, presentations and articles have indicated that improper baking was the cause of the hydrogen embrittlement in these cases.

Other experts, more familiar with ASTM specifications for both fasteners, plating, and hydrogen embrittlement, could easily tell that improper baking was not the cause of this hydrogen embrittlement failure. Those experts are Joe Greenslade, the past Director of Engineering Technology of the Industrial Fasteners Institute (IFI), and Salim Brahimi, a renowned hydrogen embrittlement researcher and the current IFI Director of Engineering Technology.



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FASTENER FAIR USA TO OFFER UNIQUE EDUCATIONAL SESSIONS AND INDUSTRY INSIGHTS



Fastener professionals will have a unique opportunity to get the latest industry trends and education with keynote sessions and breakouts at the inaugural Fastener Fair USA, which will take place April 11-12, 2018 at the Huntington Convention Center in Cleveland, OH.

Fastener Fair USA is the premier event bringing together manufacturers, distributors, suppliers and end users in this focused fastener and joining technology exhibition. The show offers a first-hand look at the latest solutions and technology available in the marketplace, networking, and top-notch educational programs developed and delivered by industry experts. There will also be networking events to facilitate relationships and collaborations with industry peers. A highlight will be the opening reception at the Rock and Roll Hall of Fame.

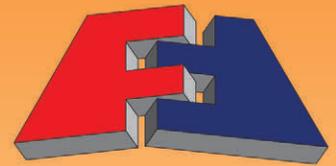
Fastener Fair USA's educational sessions will be led by experts from a variety of backgrounds and will cover topics on maintenance and repair, aerospace applications, growing your distribution business, managing data, fastener basics for newcomers to the industry, marketing, leadership, and much more.

One of the show's industry experts Dr. Andrew L. Gyekenyesi, Associate Chief Scientist and Research

Team Manager at the Ohio Aerospace Institute (OAI) in Cleveland, Ohio, will be joined by an expert from NASA to present "Looking into the Future of Space Technology." Dr. Gyekenyesi has over 25 years of experience in material development, mechanics of materials, advanced NDE, structural health monitoring, and thermal management. He has published over 80 papers, edited over 30 books, co-authored book chapters, and participated in task groups to develop engineering standards.

Show management has put together a strong line-up of educational sessions for professionals in the entire fastener supply chain, with exceptional sessions for specific industries and experience levels.





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HOW MANY W'S DOES YOUR SYSTEM ANSWER?

Things Move Fast

In the fastener business there are lots of moving parts (literally and figuratively). Keeping track of the physical parts is a hugely important job for a fastener Enterprise Resource Planning (ERP) system. Keeping track of who did what, when, how and why are an equally important capability, but these answers are often not addressed in the company's ERP system.

Fasteners don't just come in and go out, they often change characteristics while they are owned by the fastener distributor. Sometimes those changes happen in-house and other times the fasteners are changed by outside vendors.

Some examples of changes that occur are:

- ▣ Plating
- ▣ Painting
- ▣ Passivating
- ▣ Through Hardening
- ▣ Sorting
- ▣ Kitting
- ▣ Packaging
- ▣ Assembly

The Business Edge™

In The Business Edge™, since we have specialized in the fastener industry, we have made a considerable effort to make the answers to all the W's immediately available at the click of a mouse or the touch of a button.

WHO

For obvious reasons, knowing who handled the fasteners can become an important aspect of maintaining quality control and understanding where systems might be breaking down. The system should have detailed information about who worked on the parts.

User	Date	Time	Field	Original Value	New Value	Comment
Denny Cowhey	01-23-18	10:42:40	Certificate Net Amount		0	
Denny Cowhey	01-23-18	10:42:40	Amount Received		0	
Denny Cowhey	01-23-18	10:42:40	Total Quantity		12000	
Denny Cowhey	01-23-18	10:42:40	Total Weight		420	
Denny Cowhey	01-23-18	10:42:40	Net Amount		2261.8	

WHAT

In addition to showing who did something, the system should track what they did. e.g. If something was sent out for processing, the processor's name should be available for expediting.

PROCESSING P.O. INQUIRY - Basic Information	
Processing P.O.	410 Entered by: Denny Cowhey 11-16-17 @ 11:21am
Vendor	134 ACME
Processing P.O. Date	11-16-17 Bloomingdale
Date to Send to Processor	11-16-17
Original Promised Date	
Current Promised Date	
Date Sent to Processor	11-18-17
Receipt Date	02-14-18
Vendor Sales Order	
Payment Terms	N30 NET 30 DAYS
Salesperson	
F.O.B.	
Special Notes Comment	
Shipping Method	
Ship Via	

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ZAGO Manufacturing Company:

Celebrating Twenty Five Years as An Established Company

with the Heart of a Startup

ZAGO Established 1993

If ever there was a shining example of how unbridled passion and commitment result in overwhelming success, it would be ZAGO Manufacturing of Newark, New Jersey. Picture this. It was 1993 at the New Jersey Institute of Technology small business incubator headquarters. ZAGO was then just a two employee "mom and pop" operation with a lot of tenacity and determination to leave its mark on the world as a leader in the self-sealing fastener industry.

Since then, ZAGO has grown consistently to an incredibly productive established company now of 25 highly trained professionals utilizing the latest automated technology while adhering strictly to only the highest quality standards and integrity.

Continuous Change and Improvement

ZAGO views constantly changing marketplaces and market conditions as opportunities for growth and stimulators of advancement. ZAGO recognizes that great ideas in customer service, management and production can come from anywhere but are especially likely to come from sophisticated, groundbreaking customers and conscientious employees.

ZAGO is constantly improving production processes to make them leaner and more cost effective, while ensuring the use of only responsibly sourced raw materials and providing a stimulating rewarding work environment for employees.



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Dedication to All Stakeholders

As a result of its continuous improvement, ZAGO has seen revenue and profits grow by double digits over the past five years, culminating in 2017 being its best year ever! This impressive growth in productivity and profitability has been in part due to ZAGO's focus on the training and development of its workforce by supporting the in-house and formal outside education of its most promising employees. Add to that ZAGO's sincere commitment of giving back to its community through participation in numerous charitable events and you have the makings of a truly great corporate citizen and leader in its industry.

ZAGO has always believed that the best possible changes come from listening to our customers, hiring energetic, innovative and responsive employees. ZAGO then encourages its employees to experiment with the company's business model, business methods and production process to find the best possible combination of innovation and utility. In addition, ZAGO has created a company culture of diversity, understanding and consideration believing that when a business takes care of its employees the employees can focus on taking care of business.

The Future of ZAGO

ZAGO attributes some of its growth to their marketing efforts reaching out all over the world to highly diversified non-traditional industries that are producing today's highly sophisticated technology and meeting the challenges of our current environment. Although seal fasteners began as a military part, used mainly in the defense and aerospace industries, ZAGO has reached out to companies well beyond these realms and created a global awareness that their products are essential to secure all types of machinery.

ZAGO is looking at 2018 as a year to both consolidate its growth and to use its resources to make further advancements in its manufacturing technology by improving its resource planning and further automating its manufacturing processes. Taking all of these Giant Steps into consideration, it's easy to see why a small company like ZAGO has so much to celebrate on its 25th Anniversary.

And the Best is Yet To Come!

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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.

STRUCTURAL TYPE BLIND RIVETS

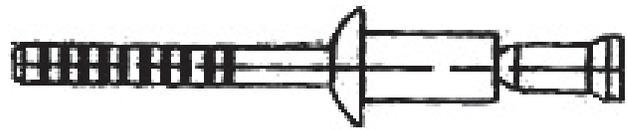
Structural blind rivets have become a major type blind rivet in the market place. The two most popular structural blind rivets are the Monobolt and the Interlock. Both of these blind rivets offer high shear and tensile strength when set in an application. Their high shear and tensile values are achieved because when these rivets are set, mandrel material remains in the body of the set rivet, giving the set rivet high shear and tensile values. In both the Monobolt and Interlock the mandrel material remaining in the set rivet body is locked in the body of the set rivet. The Monobolt uses a special nosepiece that locks a skirt on the mandrel into the rivet body when the rivet is set, assuring that this remaining mandrel material in the body of the set rivet will be permanently locked in the set rivet body. The Interlock structural blind rivet has an internal lock that also locks the remaining mandrel material in the set rivet body, but does not require a special nosepiece, a standard nosepiece functions perfectly.

I will discuss the Monobolt structural blind rivet in this article.

The Industrial Fasteners Institute (IFI) has a blind rivet specification for structural blind rivets entitled "MULTI-GRIP FLUSH BREAK PULL MANDREL SELF – PLUGGING BLIND RIVETS" Specification No. IFI-134 Revised Feb. 2003.

The Monobolt rivet has many good features to offer the user.

- High Shear and Tensile values when set.
- Positive locked mandrel material in the set rivet body.



- Multi-Grip feature
- Mandrel breaks flush at rivet body flange.

The Monobolt rivet above is produced with a Dome, Countersunk and Large Flange head. Large flange head is the least popular.

A 1/4 diameter Monobolt structural rivet having a steel body and a steel mandrel, has a minimum shear value of 2400lbs. and a minimum tensile value of 1850lbs. Both the shear and tensile values are minimum values. This means that a steel/steel 1/4 diameter Monobolt blind rivet can withstand forces of 2400lbs in shear and 1850lbs in tensile before any movement or signs of failure will appear to the Monobolt rivet. These high values are achieved because the set Monobolt has mandrel material in the shear plane of the set rivet, giving the rivet this high shear and tensile strength. The positive locked mandrel in the set rivet and the large mandrel head engagement in the set rivet body, gives the set rivet the high shear and tensile values. The Monobolt and Interlock having these high shear and tensile values has made these structural blind rivets a good choose of fastener for applications where high shear and tensile forces exist. Both having a locked portion of the mandrel in the set rivet body, ensures the user that the shear and tensile values of the set rivet are permanently in the set rivet.

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STAFDA'S FOCUS ON INDUSTRY EDUCATION

by Georgia H. Foley, CEO

The Specialty Tools & Fasteners Distributors Association (STAFDA) is a 42 year old educational association serving wholesale distributors, manufacturers, and rep agents in the construction/industrial channel. Over the decades, STAFDA has offered a variety of educational programs and services to assist members be leaders in their markets. Here is a sampling of what STAFDA is working on.

STAFDA is putting the finishing touches on an upcoming training manual, Concierge Customer Service. Written by Dr. Jeanne Hurlbert, an expert in big data and predictive analysis, the STAFDA-specific book provides the metrics to accurately measure customer service. Many companies collect feedback from their customers then have no idea what to do with it. Dr. Hurlbert began her research by surveying STAFDA members to gather their current level of customer service data, which included employee sentiment. Do customers and employees share the same vision when it comes to customer service? Does an employee feel they're offering exemplary service whereas the customer thinks it's only mediocre? The book addresses this in addition to how the different generations (Baby Boomers, Gen X'rs, Millennials) view customer service, what their expectations are, and how to provide the ultimate in Concierge Customer Service to each.

As always, each member receives one complimentary copy of Concierge Customer Service with more available at discounted pricing. This latest book joins STAFDA's series of educational training manuals including Sales

Pro, Inside Sales & Service Pro, Effective Inventory Management, Business Security, Showroom & Visual Design, and others.

STAFDA also provides a series of benchmarking studies. In even numbered years, the Association offers a Compensation & Benefits Study. STAFDA is joining 17 other distributor-based organizations this spring on a cross-industry compensation and benefits study. It will delve into over 30 job descriptions, tenure, and fringe benefits.

Administered by Industry Insights, Dublin, OH, participating members will receive three reports in one: the overall cross industry report comparing all distributor-based organizations; a STAFDA-specific compensation and benefit report; and lastly, a company-specific report where Industry Insights will offer guidance on what the member can do to improve.



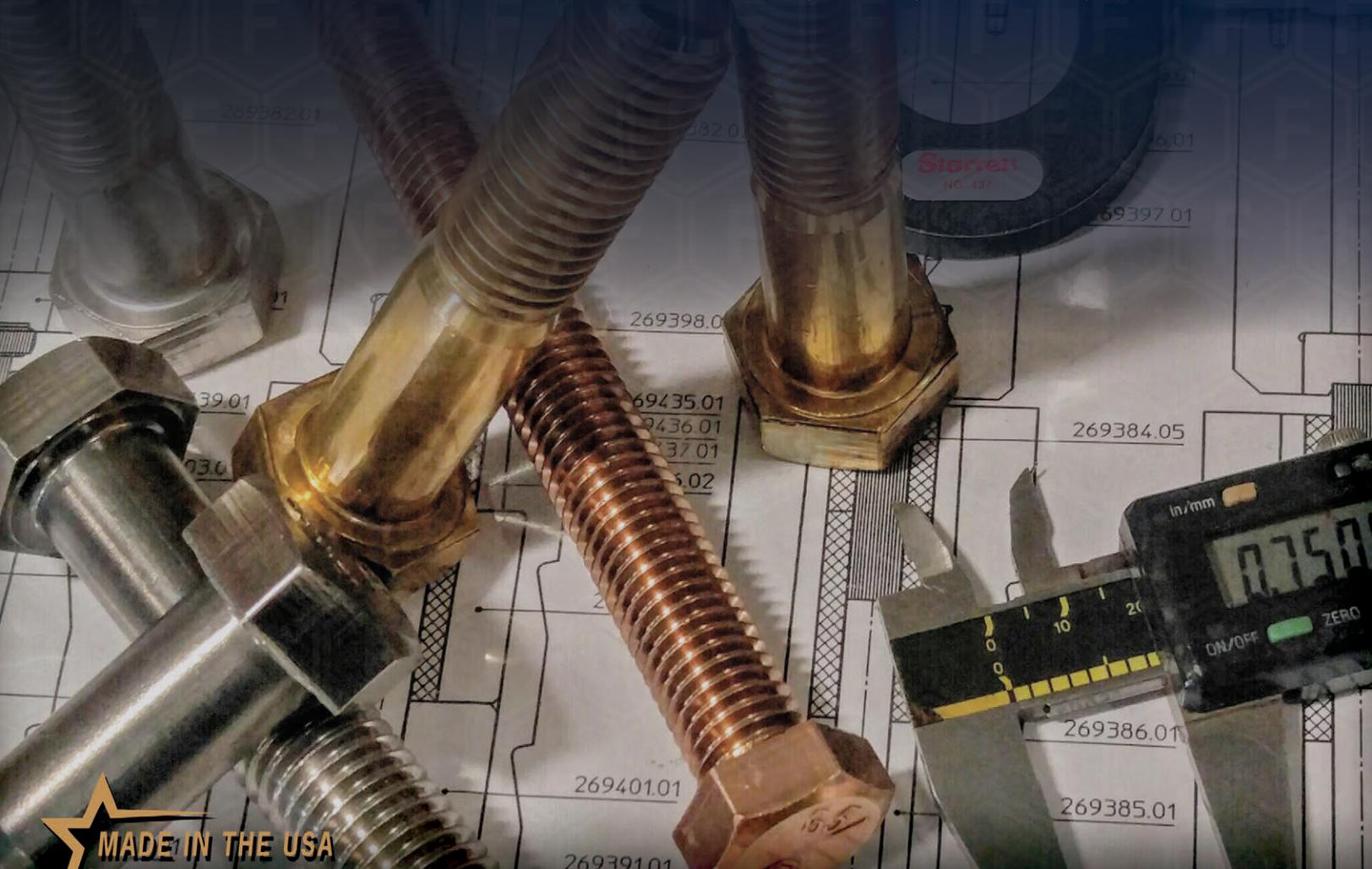
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THE 'HARD FASTENER FACTS' FOR CLINCHING INTO STAINLESS

by Michael J. Rossi, Marketing Services Supervisor

Designers will turn to self-clinching fasteners when they need a practical method to provide threads in thin-metal sheets. The fasteners install permanently; reduce hardware; and promote thinner and lighter designs. In stainless applications, though, designers may run into some particularly hard choices.

A prevalent misconception is that all stainless self-clinching fasteners will perform as intended in all stainless sheets. But the relative hardness of fastener and sheet looms as an overriding influence, because self-clinching requires that the fastener always be harder than its host sheet.

In general, installation of self-clinching fasteners is accomplished by pressing the fastener into place in a properly sized drilled or punched hole. This process causes displaced sheet material ("softer" than the fastener) to cold flow into a specially designed annular recess in the shank or pilot of the fastener, permanently locking the fastener in place.

For effective installation into stainless, however, users should realize that work hardening can occur around the mounting hole during the process. Every effort must be made to enable the displaced sheet material to flow as intended. Our ongoing recommendation is that proper installation can best be accomplished by using a special anvil with a raised ring, which acts as a second displacer of the stainless sheet material (thereby ensuring that the annular groove of the fastener is filled).

With differing stainless hardness levels available and widely varying degrees of desired corrosion resistance, decision-making can become complicated. Following are



ASSORTMENT OF VARIOUS TYPES OF STAINLESS STEEL SELF-CLINCHING FASTENERS

some guidelines and hardware profiles to help make the job easier when selecting stainless fasteners for 300 Series stainless applications (the most-often used stainless panel material):

Fastener Material

Standard stainless self-clinching fasteners made from 300 Series cannot be expected to perform reliably in 300 Series stainless sheets, due to the hardness relativity issue. These fasteners can, however, serve ideally when installed in other types of metal sheets (steel or aluminum) whose hardness is 70 or less on the Rockwell "B" scale (also designated HRB 70).

The proper fastener solutions for installation into 300 Series stainless sheets include types manufactured from 400 Series stainless or those made from special alloy (precipitation hardened) stainless. Depending on type, these fasteners can be used effectively in sheets with hardness ranges from HRB 88 to HRB 92.

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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".

COMPANIES CONTEND WITH HARASSMENT CULTURE

The cultural environment of the workplace continues to change. When we see depictions of relations between men and women on television's "Mad Men" or 1950's and 60's portrayals of women in movies and media from years past it is clear that we are living in a different world. Not only have women made professional gains in employment and leadership, but they are no longer forced to tolerate demeaning categorization or condescension based on their sexual attractiveness to men. As these cultural practices fall by the wayside so too does the willingness of women to put up with the rudeness and personal space violation that sometimes comes with overaggressive flirtatious behavior that has too often been permitted in our professional work spaces. Sometimes company management is legitimately called upon to step up and put an end to it. Distribution companies, even those with small numbers of employees, need to be empathetic and aware of these situations.

In recent weeks we have seen one instance after another of public figures facing accusations of harassment of people, usually women, in subordinate positions in their work or political organizations. These complaints have really accelerated after the high profile charges against Hollywood agent Harvey Weinstein and the subsequent parade of entertainment industry women coming forward with tales of uncomfortable encounters in that industry. The political world has been right behind in bringing these problems to the fore. The media has swarmed all over these stories no doubt because of the

celebrity of the individuals about whom the complaints are directed. But the broader conversation has extended to the plight of all women in the workforce (and indeed even men or those with differing sexual orientations) who are forced by economic necessity or the pressure of people in authority to put up with or overlook boorish behavior which contributes to anxiety, discomfort and emotional disturbance for those who are victimized. For too long it has been difficult for those targeted by this behavior to stand up and put a stop to it without themselves being shamed, attacked, ridiculed or thwarted in their careers.



Of course, there is some irony in the current push to purge the workplace of sexuality while our larger society is awash in pornography, profanity, and the "hook-up" culture. We somehow expect people to turn that all off when they enter an employment situation. It seems somewhat inconsistent.

Nevertheless, employers need to be aware of their obligation to provide protection to workers of all genders and orientations from unwanted advances and sexually hostile environments. To provide this protection is not only important from the perspective of preventing employee complaints, lawsuits, workplace disputes, and employee retention and company reputation, it is also the right thing to do from a moral perspective. Proponents of stronger institutional protections argue that we cannot just rely on people to police themselves and resolve their own conflicts. Workers look to their organization to set proper boundaries and rules and enforce them when necessary.

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All products manufactured at the company's Painesville, Ohio facility are strictly 100% melted and manufactured in the U.S.A., and are produced to various specifications including ASME, ASTM, SAE, MIL, ANSI and DIN... making Dyson America's number one source for domestically produced parts for use on large scale projects.

"All Dyson products are of the highest quality standard and are fully traceable back to raw material production" claims Mike Robinson, Head of Dyson Sales for Construction Components.

Recently, Dyson made a significant investment in two high-speed bolt forging presses. This new capability allows them to rapidly produce blank bolts, cap screws and clevis pins 30% faster than prior manufacturing methods. Dyson can hot forge bolts up to 2.25" in diameter, and with their own on-site heat-treating facility, the company is able to stock bolts in multiple grades and specifications.

"Our new bolting capabilities allow us to respond to large or small orders effectively and provides our distribution partners with even faster turn-arounds," says John Hocevar, Head of Dyson's Forged Technology line.

Hocevar further declares "Dyson is distinct among other fastener manufacturers in that it is the only manufacturer to dual certify ASTM-A194 grade 2H/ASMT-A563 grade DH heavy hex nuts."



This benefits Dyson's distribution customers by allowing them to better manage their inventory, ultimately cutting their number of stocked sku's in half since they no longer have to stock 2H and DH nuts in their warehouses. "Our 2H/DH heavy hex nuts save our customers money, time and space," states Hocevar.

Dyson's dual certified nuts are available in diameters 1.25" up to 4" in plain finish, as well as galvanized. They can also forge up to 6.5" diameter heavy hex nuts and can accommodate customized requirements.

In addition to their dual certified 2H/DH nuts, Dyson Corp. is also unique in the industry due to their various patents. They are the patent holder of the original D-LOC and M-LOC free spinning lock and seal nuts which are widely used on applications that require

vibration or liquid leakage minimization such as the mining industry. Most major mining companies use Dyson's D-LOC nuts on their crusher and shaker equipment, and they're also commonly used on other vibration prone applications such as railway systems.

"Dyson is the only manufacturer to produce D-LOC heavy hex nuts where complete thread engagement is achieved. This fully forged nut provides maximum strength and tension values for extreme working environments," explains Patrick Linehan, Director of Engineering at Dyson Corp. Linehan further clarifies, "Dyson's D-LOC nuts distribute the bearing load on irregular surfaces and locks the bolt and nut assembly together. It also creates a water-tight seal. Vibration cannot loosen the assembly due to the locking element of this product."

Find out how Dyson can help fulfill your forging and fastener needs by contacting Chelsea Johnson at cjohnson@dysoncorp.com. 



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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.

THE PARTY PLAN MEETS THE REAL WORLD

In the Winter 2018 Issue of this magazine a "Party Plan Case Study" was presented. It offered a scenario, premise, resources and lots of room for creativity, but what relevance does this have to the real world?

Last month I was contacted by a distributor who wanted a layout and planning Consultant to work alongside his Architect. The situation presented was that he is running out of space both in his buildings (multiple) and on site. Searching on his address using Google Earth confirmed that he is currently working out of a collection of buildings on an urban property bounded by well-traveled streets. There is little room for adding maneuvering space for trucks and docks in the center of the land and the probability of backing vehicles into docks facing any street is fairly low.

The existing structures are low, small and crammed full, except for a brand new, absolutely outstanding showroom designed by the same Architect. Essentially this means that any additions can only touch (not modify) the showroom and the only practical solution is to build over the various warehouses, then demolish the structures from within. Does this sound a little disruptive to day to day business? Accelerated construction around and above daily operations, customers and visitors is almost impossible to control. Even the best plans will need major tweaking on a minute by minute basis.

A cursory look at the satellite view confirmed the tight site and almost impossible situation he described. When he sent photos, existing building plans and a survey it looked hopeless without a lot of money and aggravation. But the first lesson offered by the party planning case study is that it's your party and you can do what you want. In other words there is no single correct solution.



Let's go back to the first premise that he is running out of space. Is a new building on site the only solution? What about inventory control and off site alternatives? Our next flurry of Emails directed him to make a quick count of all the solid pallets of overstock. These are usually easy to identify because they are still stretch or shrink

wrapped. There were hundreds occupying floor space and pallet rack positions that were difficult to reach because of the pallets on the floor blocking movement.

While counting he also watched his staff dealing with the crowded conditions. Even without an Industrial Engineering study it was obvious that efficiency was non-existent because the same pallets were being constantly shifted to open access to materials being picked, stocked or replenished. Product damage from all this movement in confined areas was shocking. Standing in any one place and rotating 360 degrees he saw wasted time, energy, resources and inventory. His people were working hard, but definitely not smart.

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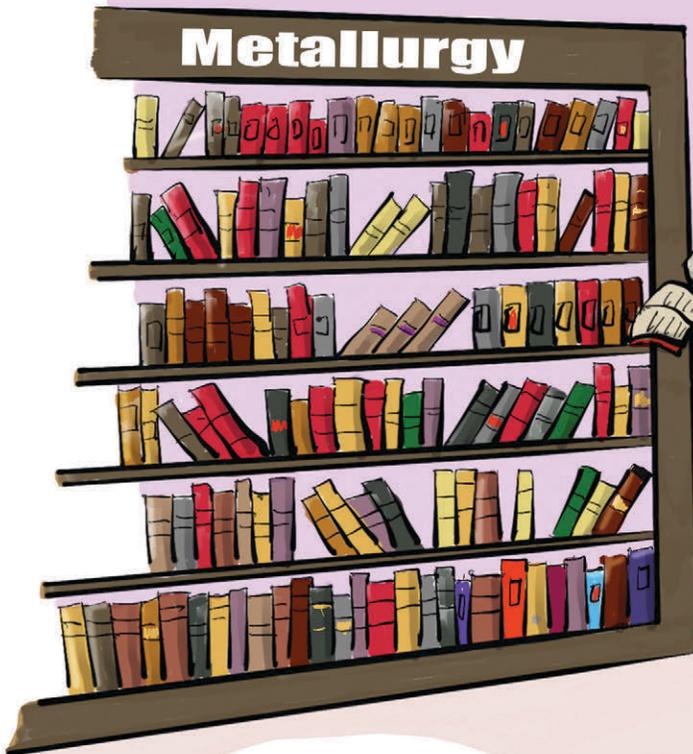


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END OF 2017 FIN SURVEY: MAJORITY SAY SALES UP

Just shy of 80% of participating companies in the 39th annual Fastener Industry News Survey plan to raise fastener prices in 2018.

Just 4.17% of the End of 2017 FIN Survey participants expect to lower prices and one quarter predict no change in prices.

That follows nearly 80% reporting 2017 costs were higher than 2016. Of that 70.83% reported “Moderate” increases and 8.33% “Strong” cost increases. Just eight percent found “Moderate” cost decreases and 12.5% no change during 2017.

▫ **TWO THIRDS OF PARTICIPANTS REPORTED SALES INCREASES** for 2017 vs 20.8% experienced sales drops and for 12% sales were level. The percentage reporting sales increases was above 60% in the 38th annual FIN Survey at the end of 2016.

The sales forecast for 2018 showed three-fourths anticipate a sales increase; 16.67% a decrease; and 8.33% expect sales to remain the same as 2017.

▫ **NEARLY A 70% MAJORITY ANTICIPATE A PROFIT INCREASE** in 2018. Predicting an increase: 69.75%; Unchanged 21.74%; Decrease 8.7%.

▫ **CAPITAL EXPENDITURES FOR 2018:** Twelve percent forecast capital expense increases; more than two-thirds plan to decrease; and 8% unchanged.

That prediction follows 20.83% reporting a strong increase in capital expenditures for 2017 over 2016 and another 29.17% a “moderate” increase. More than one-

third reported unchanged capital expenditures; 8.3% a “moderate” decrease and 4.1% “strong” decrease.

▫ **COSTS IN 2017:** A 70.8% majority found “Moderate” cost increases in 2017 and another 8.3% “Strong” cost increases. Costs were unchanged for 12.5% and a “Moderate” decrease for 8%.

▫ **COSTS IN 2018:** A 57% majority predict cost increases in 2018; 21% decrease; and 21% remaining the same. That follows more than three quarters reporting cost increases in 2017 over 2016: 8.33% “strong” increases; 70.83% “moderate” increases; 8% cost decreases; and 12.5% with costs unchanged.

▫ **MANUFACTURERS** participating in the FIN Survey reported operating from half to 90% of capacity – for an average of 70.2%. They forecast a slightly higher level for 2018 at 75.4%. Steel prices have risen an average of 7.1% in the past six months.

▫ **DISTRIBUTORS:** What was your gross margin on fasteners in 2017? Gross margin ranged from zero to 65%, averaging 37.7%

▫ **INVENTORY TURNOVERS:** Participants reported inventory turnovers from 1.8 to 28, averaging 2.85.

▫ **EMPLOYEES:** Half the companies added employees during 2017; employment total remained the same for one-third; 16.7% decreased the number of employees.

What percentage of pay increase will your company give employees in 2018? The figures ranged from zero to 5%, averaging 2.9%.

distributornews

AZ Lifting Hardware (AZLH) is proud to announce the sales team of Toal and Associates will represent them in the states of Kansas, Missouri, Nebraska and southern Illinois.

Toal and Associates was established in 1964 by Robert Toal to serve fastener and industrial distributors in the central Midwest markets. Mike Toal, who covers Kansas and Nebraska, joined the agency in 1986 opening a second office in Kansas City. In 1995 Steve Oelklaus, who covers Missouri and southern Illinois, came on board to expand coverage out of the St. Louis office. Toal represents several complimenting product lines which also sell only through distribution mirroring the AZLH philosophy.

"I met Mike Toal at the Fastener Show in Las Vegas this past year. After several conversations we recognized our goals were similar and the customer type Mike and Steve targeted would be a perfect fit for us." Says Chuck Smith, president of AZLH. "We're excited to have solid representation in this market; there is no doubt we will be do better job serving our customers with the Toal team on board."

Contact Mike Toal 913-568-5808/miketoal@sbcglobal.net and Steve Oelklaus 314-308-6262/oelklaus@charter.net.

For more information, contact AZ Lifting Hardware at contact them at 7150 W. Roosevelt St. Ste C101, Phoenix, AZ 85043. Tel: 1-888-936-1466, Fax: 623-936-8909 or visit them online at www.azliftinghardware.com.

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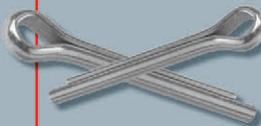
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EARNEST MACHINE CELEBRATES 70 YEARS OF PUTTING CUSTOMERS' NEEDS FIRST

When Paul Zehnder founded his fastener business in Cleveland in 1948, he likely never imagined that it would still be going strong 70 years later. But Earnest Machine is indeed still going and growing, thanks in no small part to Zehnder's idea of putting the needs of the customer first.

"We've been following my grandfather's lead and putting our customers' needs first for 70 years, and will continue doing that," said Kirk Zehnder president of Earnest Machine. "To that end, we're focused on expanding our product lines, helping customers become more efficient, and making several investments as part of a continued commitment to manufacturing—all backed by our industry-leading service guarantee."

Along those lines, the company took several recent strides to better serve its customers, including:

- ▣ Expanded its product offering to more than 10,000 large-diameter and hard-to-find product SKUs, including domestic hex nuts and metric hex cap screws.
- ▣ Added capabilities for high-volume production and specialty drilling of holes from 3/64" to 13/32" and anywhere in between, including hex heads, socket heads, thread and core drilling.
- ▣ Added new machines to its Rocky River manufacturing facility to better manage workflow and enable Earnest to respond more quickly to rush orders.
- ▣ Recently relocated its Atlanta distribution center and will relocate its Indianapolis DC in spring of 2018.



PAUL E. ZEHNDER FOUNDED EARNEST MACHINE IN 1948 WITH A SINGULAR IDEA, "PUT THE CUSTOMER AT THE CENTER OF EVERYTHING YOU DO".

The two facilities will be identical, with improved efficiency and speed.

Zehnder notes that all of the above improvements are part of the company's focus on "Five S" service: Sourcing, Standards, Specialty work, Services, and Support.

"We're able to source parts from anywhere in the world and can also do specialty work such drilling, cutting and machining parts to print which helps our customers turn opportunities into sales," said Zehnder.

70 YEARS

AS WE ENTER OUR 70TH YEAR, THE IDEA OF PUTTING THE CUSTOMER FIRST STILL REMAINS AND GUIDES OUR PLANS FOR THE FUTURE.

Earnest Machine also offers services that save customers time and money, including:

- ▣ Drop-shipping directly to your customers
- ▣ Online ordering to reduce time and effort
- ▣ Kitting and packing in poly bags with your logo or your customer's logo
- ▣ Bulk quantity discounts
- ▣ Stock and release programs
- ▣ Broken case quantities so that you don't have to buy 200 items when you only need 20.

"The engineering and technical support we provide enables us to offer custom solutions," noted Zehnder. "Finally, we're proud of our robust quality control and adherence to ISO management standards. We're one of the few companies that shares performance metrics such as order entry accuracy, parts accuracy, quantity accuracy and on-time delivery with our customers on a monthly basis, and we're proud of our 99.96% overall accuracy rate."

To further raise awareness about the company's 70th anniversary, Earnest Machine will help the industry focus on the future by sponsoring the inaugural Fastener Fair USA in Cleveland, OH, on April 11 and 12, 2018.

"Fastener Fair USA is essentially being held in our backyard," noted Zehnder, "so it makes sense that we celebrate our 70 years in the fastener industry by helping

to make Fastener Fair USA a special event for everyone who attends.

Earnest's sponsorship will reinforce the company's focus on "What's Next" in the industry and will include the Earnest Main Stage, which will feature several experts speaking on topics such as marketing, sales and distribution, maintenance and repair, aerospace applications, fastener basics for industry newcomers and much more.

"Cleveland was a manufacturing mecca and home to many fastener companies in 1948 when our company was founded," added Zehnder. "The city lost some of its luster in the 70's and 80's but has come back strong. Our sponsorship of Fastener Fair USA will show that—like Cleveland—Earnest Machine is going strong and is ready to help define 'What's Next' for our industry." 



EARNEST HAS RECENTLY ADDED CAPABILITIES FOR HIGH-VOLUME PRODUCTION AND SPECIALTY DRILLING OF HOLES FROM 3/64" TO 13/32" AND ANYWHERE IN BETWEEN, INCLUDING HEX HEADS, SOCKET HEADS, THREAD AND CORE DRILLING.

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GOING SMALL IN A BIG WAY

by Jürgen Wenzel



Advances in technology have made products like cell phones, computers, medical devices, and other electronic products much smaller in size than in the past.

The goal of this relentless drive toward miniaturization is to reduce weight and mass which in turn leads to greater efficiencies and lower costs.

How small is small? Researchers in the medical field have come up with a term for it: "electroceuticals." These tiny devices can work within the body to monitor the concentration of drugs and adjust it accordingly, or to recharge a tiny pacemaker by holding a credit-card-sized power transmitter up to the chest.

Automobile engines have become increasingly smaller, yet are still able to deliver the power of their larger, gas guzzling predecessors.

Chargers for cell phones are as small as 4 inches by 2½ inches, yet still get the job done.

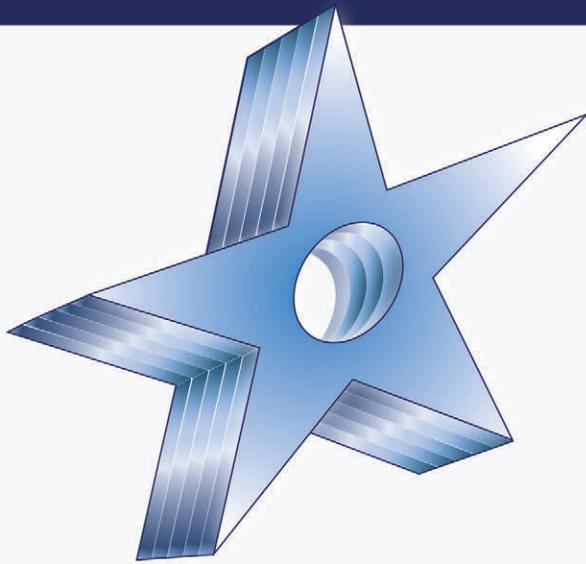
Rotor Clip accommodates this trend by manufacturing

retaining rings and wave springs in small sizes to accommodate compact spaces in a variety of industrial and electronic products. This range of smaller sizes extends throughout their entire product line so that you can be sure to find the right type of retaining ring (tapered, constant section or spiral) or wave spring to meet your size reduction requirements. For more information, contact Rotor Clip's technical sales engineers at tech@rotorclip.com.

Here are some examples of the smallest retaining rings and wave springs Rotor Clip manufactures:

At a mere 1mm in diameter this "E" type tapered retaining ring is used on a number of electronic and computer-controlled instrumentation.





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distributornews

Hafren Security Fasteners, stamping out the impact of theft, globally. Together, we can stamp out the impact of theft. The global security fastener experts - Hafren Security Fasteners, is looking for distributors in the United States, to partner with in the supply of specialist tamper-resistant/anti-theft screws, nuts & bolts.

Carefully selected partners (by Hafren) will benefit from a wide range of security fastener products, many of which are unique to Hafren Security Fasteners - driven by a need to keep things safe from the consequences of vandalism; theft and tampering (avoiding litigation).

For the right businesses, this offers excellent margin enhancement benefits, when compared to ordinary, more traditional fixings. At the same

time, the partnership with Hafren will facilitate access to a higher market share and penetration opportunity within the rapidly developing fastener market.

In addition, security fasteners from Hafren will help distributors position themselves differently in their market and as leaders in a fast paced, growing area of specialist anti-tamper security fasteners.

Summary benefits include:

- Greater profit margins on security fastener products.

- Supply: Hafren Fasteners has a wide range of security fasteners available from stock and can deliver globally - with proven logistics processes and know how.

- Industry leading service: we have an excellent track record for outstanding customer service.

- Our friendly and helpful staff is readily available, offering professional advice and support.

- All backed up by internationally recognised standards for quality & environment systems.

- Innovation: since 1995, Hafren have been developing industry leading, patented security fastener products - meaning we are one step ahead of the market... and the criminals!

- Our entire R&D is customer focused, driven by working closely with professional users - then developing new solutions in the ever changing landscape of vandalism; theft and tampering.

Interested in becoming a partner? Contact Hafren Security Fasteners at Unit 23, Mochdre Industrial Park, NEWTOWN, Powys, SY16 4LE, UK. Tel: +44 (0)1686 621 300, email: export@hafrenfasteners.com or visit them online at www.hafrenfasteners.com.

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MARKETS AT 2018 FASTENER EXPO by Courtney Harold

On the heels of record-breaking attendance at their October 2017 show, the International Fastener Expo partnered with Berlin-based EFDA (European Fastener Distributor Association) to bring a large delegation from 11 different European countries to IFE 2018. The EFDA represents 170 European-based innovators with collective sales of more than 4 billion Euros.

EFDA's "Securing the Future" documentation describes the global fastener industry with great concern. "Our sector is no longer a simple 'box-shifter' that can adapt overnight to changes in the regulatory environment." As Karalynn Sprouse, EVP, Emerald Expositions notes, "EFDA's participation at IFE 2018 will help American interests understand how Europe has responded to the fastener industry's globalization crisis, effectively managing an increasingly complex global supply chain shift."

Thanks to three decades of partnerships IFE has established with domestic associations (NFDA, Pac-West, MWFA, SFA, SEFA and NCFDA) and media partners the 2018 International Fastener Expo is expecting to surpass last year's record-breaking attendance. With 80% of 2017's exhibitors already renewed and twelve new first-time exhibitors already confirmed. The following is just a sampling of new exhibitors to be found at IFE 2018: American Belleville, Alpha USA, Clampco Products, Project Industries Inc., Enoch Precision Machining, Foerster Instruments, Eurolink FSS, LLC, Bar Stock Specialties and The DECC Company. PC Engineering will be exhibiting in our fastest growing area – Machinery.

IFE 2018 will be held at the Mandalay Bay resort from October 30 – November 1 in conjunction with the 70,000 vendors and buyers who gather for the SEMA Show. IFE

2018 will also expand their Global Source area, making IFE a global presentation and marketplace right in the U.S.A.; saving attendees on travel time and sales team expense.

About IFE 2018

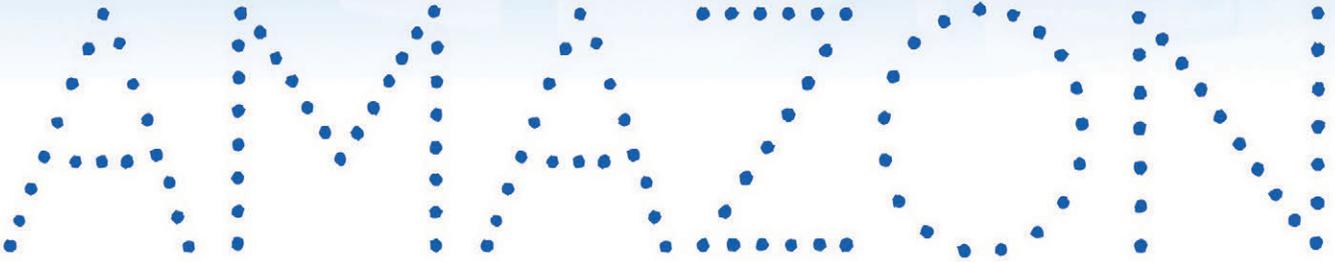
The International Fastener Expo (IFE) is the largest and most diverse gathering of fastener and industrial professionals in North America. Founded in 1981 it serves all reaches of the supply chain, from manufacturer to distributor to end user, and features nearly 70 product categories. With over 850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

About Emerald Expositions

IFE is owned by Emerald Expositions, the largest operator of business-to-business trade shows in the United States, with its oldest trade shows dating back over 110 years. The company operates more than 55 trade shows, including 31 of the top 250 trade shows in the country as ranked by TSNN, as well as numerous other events. Emerald Expositions' events connect over 500,000 global attendees and exhibitors and occupy over 6.7 million NSF of exhibition space. The company has been recognized with many awards and accolades that reflect industry leadership as well as the importance of its shows to the exhibitors and attendees they serve.

For information, or to book a booth at IFE 2018, visit www.fastenershows.com. 

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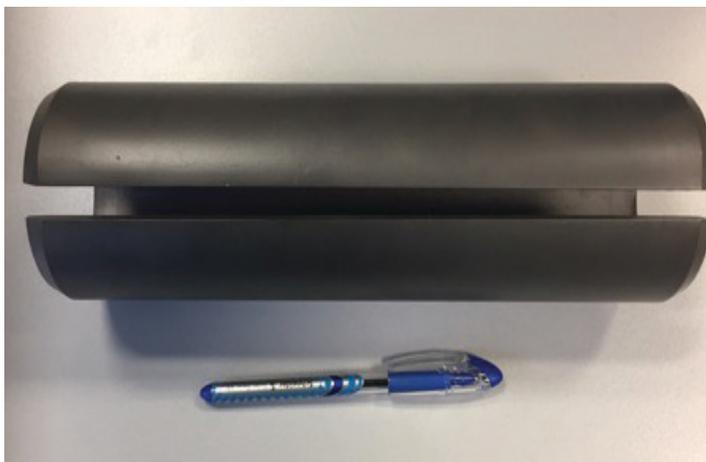
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The slotted tension pin is a multi-purpose, non-threaded, versatile and economic fastener. Engineers have been quick to utilize the inherent advantages these pins provide in various applications. The cost saving feature of the slotted pins have proven to be a superior fastener application design for years. It is a fastener which not only simplifies design but reduces assembly and production costs. One big attribute of these pins is time-saving because they can be installed in a single operation. The pins have a broad range of applications and design characteristics.

The slotted tension pin is tubular in shape, with a longitudinal slot and chamfer to facilitate hole insertion. It is offered in several materials, the most common being high carbon spring steel thru-hardened. The combination of material, hardness, and design provides a stronger joint than many of the mild steel solid pins, taper pins, or grooved pins of like diameter. The ISO 8752 heavy duty and ISO 13337 light duty tension pins have the greatest range of diameters and lengths from 1 millimeter to 50 millimeters in diameter and up to 200 millimeters in length in the standard range. Special lengths up to 250 millimeters can be engineered and ran to order in both the ISO 8752 and ISO 13337. ASME B18.8.2 pins range from a 1/16 to 3/4 diameter. Additionally parts can be made 7/8 and 1" diameter to 9-1/2" in length. Materials that the parts are made from is high carbon steel, 18-8 stainless steel, 316 stainless steel, A2, A4 and other alloys are available upon request. The pins



mostly are utilized plain finish. We do have a number of customers who request mechanical zinc; black oxide and dip spin plating's.

The design of the spring pin is such that in the free state, commonly known as pre-load, is slightly larger than the hole it will be inserted into. The slot allows for compression under insertion which provides positive radial tension and prevents loosening caused by vibration or shock. The spring pins slot dimension, outside diameter, and elastic limits are engineered so that this self-locking action is achieved when inserted into holes made to normal production tolerances.

Large diameter pins offer the design engineers an easy cost, weight and time saving. They can replace up to 12 types of fasteners. The versatility, speed of production, and reduction in application operations are why these pins are so widely used in these industries: agriculture, construction, mining equipment, off-road, utility vehicles, forestry, material handling, heavy truck and railroad.

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THE VALUE OF TRADE SHOWS... A GREAT PLACE TO LEARN

With computer-mediated technologies facilitating more business transactions than ever before one would think that trade shows represent a marketing strategy of the past. Ironically, even with the rise of digital e-commerce, trade shows have become more vital for buyers and sellers. Although product sourcing and procurement can easily be conducted through the internet, it allows for a market flooded with options and poor information. Trade shows offer a one stop shop for direct access to the product experts and a place to get questions addressed quickly. Not only can visitors compare products, see what's new and network...they can learn! The reality is that business professionals, especially in the fastener industry, will always require face to face dealings to make decisions about the products they buy and sell.

While the primary reason to attend a trade show may be to see new products and keep up with industry trends, they are also a great place to learn. Lectures, keynote speakers, workshops and panel discussions are key elements of successful trade shows. Although potentially higher cost than web based options to attend, by taking advantage of all that quality shows have to offer, it's an investment high on returns for every level of employee.

The Fastener Training Institute has always supported trade shows and regional tabletop events with educational content. Like manufacturers with product experts, FTI provides access to the fastener industry's most renowned specialists and leaders. We use the title "Industry Expert" for a reason, our instructors are the leaders of

the industry vesting years of time specializing in their field with research and expertise. Take advantage of hearing their thoughts and perspectives when you meet them in person at one of our classes.

For the first time, the Fastener Training Institute will offer two classes during the same venue, at the upcoming Fastener Fair USA. Fastener Fair USA is the first show to incorporate the entire supply chain under one roof. Manufacturers, distributors and end users together, this translates to fastener users of all levels of knowledge, needs and experience. To support all the visitors attending the show and their range of knowledge the Fastener Training Institute will present on April 10th, "Fastening 101" and "Understanding the Bolted Joint", both sponsored by the Fastener Education Foundation. What better way to prepare for a two-day trade show than with some product knowledge!

Fastening 101 is instructed by industry leader Laurence

Claus. This class is a must for those new to the industry as well as anyone who wants to know more about the products they buy, sell, warehouse and use. The seminar



is perfect for manufacturers, distributors and end users. Students will explore how fasteners are manufactured as well as some basic engineering concepts. Topics include fastener design and material options, head styles and drive configurations, heat treatments and platings plus a discussion on why there are cost differences from one fastener to another.

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All America Threaded Products, Inc

introduces a new line of material options for threaded products including F1554, domestic B7 and Grade 8. These will be added to their current material offering of low carbon steel, T304 stainless steel, T316 stainless steel, ASTM A449, brass, aluminum and silicon bronze. The chemical and mechanical compositions of these new materials offer greater benefits to specific industries through increased yield strength, ductility and brittleness.

ASTM F1554 is a construction fastener specification developed by the American Society for Testing and Materials that specifies straight, bent, headed or headless anchor bolts and fully threaded rod. All America Threaded Products will now manufacture F1554 grade 36 and grade 55 for all threaded rod products, specials and anchor bolts.

ASTM A193 B7 is a bolt specification for alloy steel that is quenched and tempered to meet requirements. All America Threaded Products will now use domestic B7 in the manufacturing of threaded rod products in any length up to 12 feet.

All America Threaded Products will dual certify to ASTM A354 BD and SAE J429 Grade 8. The Grade 8 material from AATP will be 100 percent domestically supplied and manufactured. ASTM A354 BD is used for structural bolts while SAE J429 Grade 8 is an automotive specification. Both specifications are heat treated and tempered at 800°F. All America Threaded Products will be one of a few companies to offer this new, domestic material in threaded products.

"We have always been a leader in specialty threaded rod products and with the addition of these new materials, we can now reach new customers with specific requirements per industry standards," said Mike Griffith, General Manager of AATP. "F1554 will significantly help our current construction customers who require these specifications on every project they encounter."

Widening the material offering to meet industry and regulatory standards is a welcome addition to the broad product offering from AATP.

For more information, contact All America Threaded Products Inc. by Tel: 1-800-354-3330, Email: info@aatprod.com or visit www.aatprod.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 received 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.

WHY GETTING YOUR COMPANY VALUATION IS IMPORTANT AND HOW IT WORKS

All business owners should be asking themselves "What is the true value of my business?" It is a vitally important question because the value of your business will have a significant impact on both personal and professional aspects of your current life and your future. Oftentimes, the business is the owners' most valuable asset. Knowing the true value of this asset provides a realistic perspective from which to plan for the future direction of not only your business, but also the future income needs of you and your family. Once the value is known effective plans and strategies can be put into place for future growth, business continuation, succession planning, and retirement planning.

Many business owners assume they should only care about how much their business is worth if they're looking to sell or are going through a difficult situation, such as a divorce or corporate breakup. Unfortunately, this is an extremely shortsighted view that misses the bigger picture. Every single business owner should know how much their business is worth, because it's the only measure that takes into consideration where your company has been, where it is today and, most importantly, where it's going in the future.



Benefits of Getting a Business Valuation

[1] Better Knowledge of Company Assets - It is significantly important to obtain an accurate business valuation assessment. Estimates are not acceptable as it is a generalization.

[2] Understanding of Company Resale Value

- If you are contemplating selling your company, knowing its true value is necessary. This process should be started far before the business goes up for sale on the open market because it allows

more time to increase the company's value and achieve a higher selling price.

[3] Obtain a True Company Value - You may have a general idea of what your business is worth, based upon simple data such as stock market value, total asset value and company bank account balances. A valuation helps to show company income and valuation growth over the course of the previous five years something potential buyers like to see.

[4] Better During Mergers/Acquisitions - If a major company asks about purchasing your company, you have to be able to show them what the value is as a whole, what its asset withholdings are, how it has grown, and how it can continue to grow.

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CYBER THEFT ATTACKS SMALLER COMPANIES

by Nancy Rich

On February 22nd the Mid-West Fastener Association and National Association of Surface Finishers/Chicago Midwest Chapter hosted a dinner meeting, with FBI Special Agent K.C. Bixby as the guest speaker, enlightening attendees on the seriousness of cyber attacks. There has been extensive coverage and warnings regarding the importance of cyber safety to eliminate cyber theft. However, many feel it's not an issue that they have to worry about. The interesting fact is the main target of cyber thefts are small businesses -250 people or less.

Cyber attacks are prevalent with a huge increase from 2007 to 2017, which sadly was the decade of the hack. Scam emails requesting money have a 1% success rate which generate a large amount of money collected.

The priorities of the FBI are Terrorism, foreign intelligence and espionage, cyber base attacks, and combating public corruption. There are over 1,000 skilled cyber FBI agents in the Midwest alone. The best way to reduce the risk is by training companies to understand the risk of threats. Most companies who receive a cyber attack do not survive in business.

Threats come from social engineering insider threats, and malware ransom ware. Everyone is vulnerable as they use computers. Some of the issues putting computers at risk are: not updating software, physical security is weak, the introduction of new devices into the network, open availability of personal information. Unfortunately most people make it easy for the bad guys!

Why do cyber attackers go after small companies? Most small companies cannot afford good defense systems for their network, putting them at a greater risk for a cyber attack. This leaves them open to hackers. Attackers come many ways including,

professional and recreational hackers, hacktivists, cyber terrorists, competitors, insiders (employees), and criminal organizations. The key is to make your company network more difficult than your neighbors so they move on. The attackers will check your system for vulnerability, zero day exploits, malware, and weak passwords. 5,000 passwords can be tried in a second. Most attackers are criminals outside of our country.

Considerations a company should take include having a cyber check system, a level of security for each program and data, needs for banner warnings, log on and intrusion detection, institute independent exams, and have a written plan. Anyone feeling they have received a cyber threat can contact the FBI via ic3.gov or contact their local office.

One simple way to secure better security is to have a robust password-use a phrase not your pet's name or birthday, or other obvious passwords. Too much information is on the internet allowing hacktivists access to too many parts of our lives which assists in helping them determine passwords. Also remember to always backup!! 



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John R. Graham

John Graham of GrahamComm is a marketing and sales strategy consultant and business writer. He is the creator of "Magnet Marketing," and publishes a free monthly eBulletin, "No Nonsense Marketing & Sales Ideas." Contact him at by email at jgraham@grahamcomm.com, call 617-774-9759 or visit him online at www.johnrgraham.com.

STRATEGIC CHANGES FOR CLOSING MORE SALES

For most of us, what we learn first sticks with us for a long time, often throughout our lives. Nursery rhymes, along with what we consider right and wrong. The acorn doesn't fall far from the tree.

It happens to salespeople, too. Because our early training is indelible, it stays with us to guide us. But new demands and expectations call for strategic changes to keep up, stay relevant and close more sales.

Here are five of them:

Change Your Thinking About What You Know

Salespeople are known for being sure (sometimes overly sure) of themselves. Although it takes self-confidence to keep going, it also has a risky downside. It can lead to believing we know more than we do. And nothing kills sales faster than arrogance.

A website designer's creativity gave him an initial edge with a prospective client. In spite of his obvious talent, he lost the job. His presentation was his downfall. It was obvious he had not taken the time to understand the organization or its services. He was so focused on what he was selling, he didn't have a clue as to what his prospect wanted to buy. In other words, he didn't know what he didn't know.



Unless salespeople consciously challenge their thinking, they hand sales to the competition. We all benefit by asking ourselves these questions: What am I missing? What don't I know? Are my assumptions correct?

Change The Way You Prepare Presentations

Do you think you're at a place where you can "wing it" or all you need to do to get ready for a presentation

is to make a few notes, a quick outline, or go over it in your mind? If so, you're deluding yourself and short changing your employer and your customers. You may be good, but you're not that good.

Like it or not, here's the truth:

If we don't write it, we only think we know it. This is what happened to the arguably brilliant Hillbilly Elegy author J.D. Vance when he went for job interviews at a prestigious Washington, D.C. law firm while at Yale Law School.

The last interviewer asked me a question I was unprepared to answer: Why did I want to work at a law firm? It was a softball, but I'd gotten so used to talking about my budding interest in antitrust litigation...that I was laughably unprepared.

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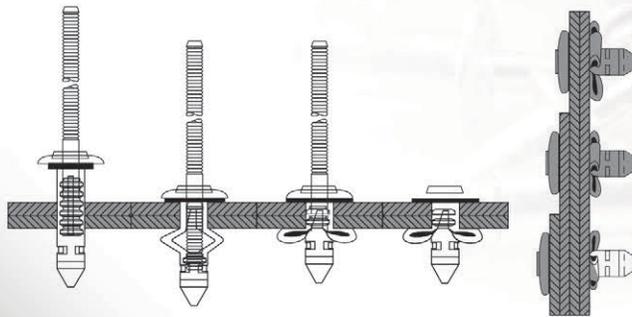
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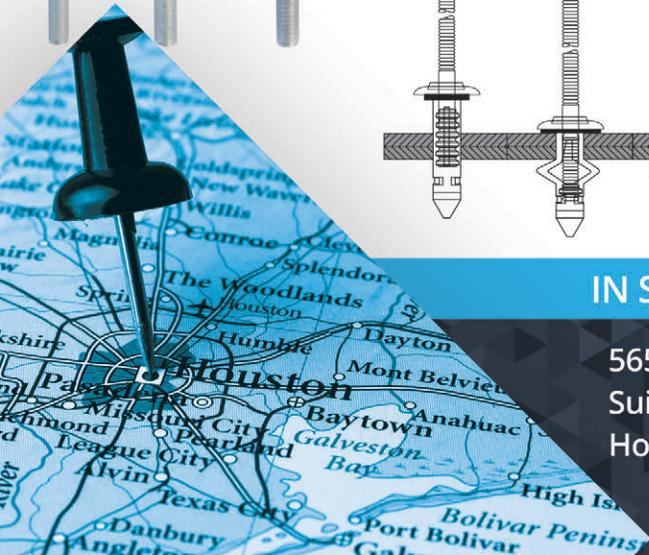


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THE MARK VI CONTROLLER FOR THE SERIES 2000 HIGH PERFORMANCE FEED SYSTEMS by Christie L. Jones, Market Development Manager

SPIROL is pleased to announce the redesigned Mark VI controller for their Series 2000 High Performance Feed Systems. The Mark VI Controller introduces a 7" touchscreen display with 50 recipe storage capacity and Ethernet interface for remote access and control.

The Mark VI is unique when compared to conventional feeder controls because it monitors the operation of the Series 2000 feed system and continuously adjusts the output drive frequency to match the natural resonant frequency of the drive unit. The controller automatically adjusts the power level and synchronizes it with the two independent axes of motion within the drive unit to achieve maximum feeding efficiency.

Enhanced Features Include:

- ▣ USB receptacle provides access for firmware updates while in the field
- ▣ Ethernet connection for remote web browser access with full functionality
- ▣ RS232 receptacle provides serial communication with queries and commands to set power levels
- ▣ Input port and cable allows for remote stop/run, track sense on/off, vertical inhibit which will idle the bowl, and feed direction reversal of the S2000 Drive
- ▣ Output port and cable allows Mark VI control of accessory equipment
- ▣ A large capacitor bank recycles energy, promoting efficiency and conserving energy effectively reducing your carbon footprint

Elliptical bowl motion generated by the coordination of the two axes of motion provides the following benefits:



- ▣ Smoother, gentler feeding eliminates damage and significantly reduces noise levels
- ▣ Consistent part per minute feed rate
- ▣ Bowl interchangeability on one drive unit without the need for mechanical tuning
- ▣ Ability to discharge all product from the bowl to accommodate small batch runs
- ▣ High speeds, up to 2.5X conventional system rates

This system is ideal for fragile, tactile, and slippery parts. Remote access, multiple program feature and continuous feedback loop puts the SPIROL Mark VI Controller with Series 2000 High Performance Feed System on the leading edge in feeder technology. ●



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Continental-Aero operates on a national scale with stocking warehouses strategically located throughout the United States. This network of warehouses and sales offices enables Continental-Aero's customers, both large and small, to be competitive with timely, cost-effective delivery and regional customer service.

Continental-Aero is an ISO 9001:2015 certified and RoHS compliant company, assuring every customer the peace of mind that they will always be receiving only the best quality fastener manufactured in world-class facilities.

With an eye toward laboratory accreditation in the future, Continental-Aero is excited to announce new equipment additions to support our continued commitment to quality. SCHATZ® "Analyze" system (including SCHATZ® Vibration Tester) to evaluate tightening characteristics of mechanical fasteners: torque-tension, co-efficient of friction, clamp load and prevailing torque. New, updated plating thickness

analysis equipment is also being added to further our testing capabilities. Continental-Aero is part of the TRAMEC LLC group, and shares their belief that having the right equipment is key to being a leader in the field.

As the recognized industry leader in nylon insert locknuts and a major supplier of all-metal locknuts and hex nuts, Continental-Aero has added additional product offerings to complement their existing lines.



AERO-FLEX™, our flexible all-metal prevailing torque locknut is currently available in light hex patterns. Appropriate for use in high temperatures and high vibration applications, these locknuts offer greater re-usability than standard all-metal locknuts. Additional patterns and sizes will be coming soon.

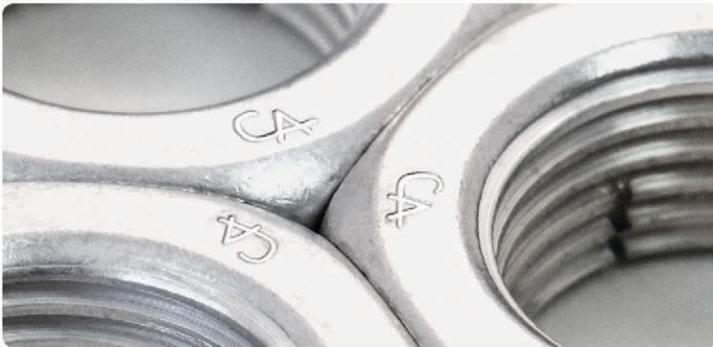
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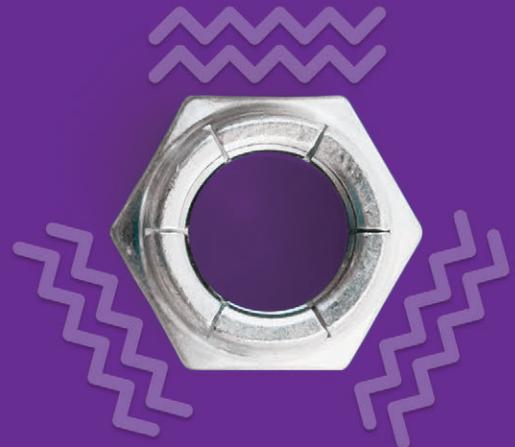
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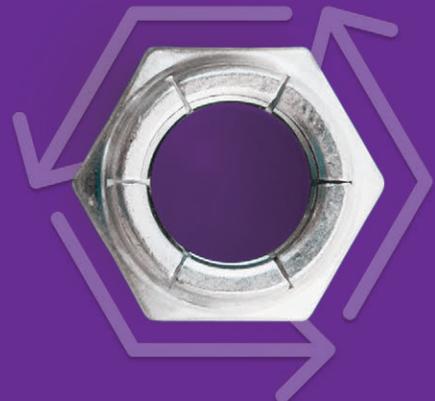
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Pivot Point Incorporated, a manufacturer and importer of fastening solutions has expanded their manufacturing operation.

The company recently completed the purchase and renovation of a 15,000 square foot industrial building that is adjacent to their main production facility. The company states that they have also recently invested in additional production equipment and have hired many new team members over the past few months.



Says company President Dave Zimmermann, "We've been rapidly growing the past few years and this expansion really positions us for continued growth and continued service to our customers- including new high tech, high speed production equipment providing low costs, highest quality and fast turnaround times." Pivot Point states that they have moved a production cell and inventory into the new building, making room in the main production facility for adding equipment and expanding those production cells.

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



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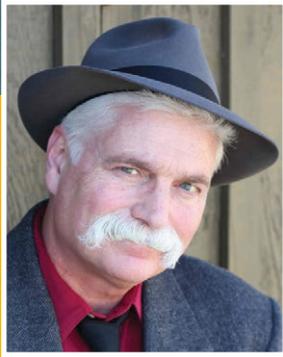
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Gary Sheely

Gary Sheely is a Tactical Confrontation Specialist focusing on workplace violence issues. He's published three books, including his latest one, "Safe at Work: How Smart Supervisors Reduce the Risk of Workplace Violence." He conducts training workshops and has been a keynote speaker across the United States. He can be reached at garys@safetyinstitute.com.

6 RISKY MISCONCEPTIONS ABOUT WORKPLACE VIOLENCE

Knowledge is power. False knowledge exposes everyone to risk. This is especially true when evaluating your workplace for the risk of workplace violence. Misconceptions about workplace violence all-too-often lead to poor policies and decisions that can leave workplaces more exposed to dangers. Here are six common myths to consider regarding your workplace.

"It Can't Happen Here"

This myth is hazardous because it can create a false sense of security and cause management to ignore important warning signs. In truth, violence can happen in any workplace. Management must have a realistic awareness of risks and the tools to assess and manage them. Rational awareness, not paranoia, is the key to cultivating safer workplaces.

"Workplace Violence is About Murder"

It's easy to take the impression from sensational media coverage of mass shootings in workplaces that workplace violence always means people are being shot and dying. In fact, not so. The FBI issued a study in 2002 called "Workplace Violence: Issues in Response." In it

they report: "Homicide and other physical assaults are on a continuum that also includes domestic violence, stalking, threats, harassment, bullying, emotional abuse, intimidation, and other forms of conduct that create anxiety, fear, and a climate of distrust in the workplace. All are part of the workplace violence problem."



"Potentially Violent People Can Be 'Profiled' and Screened Out"

Wrong. Those who commit violence in the workplace can be of any demographic background. When we turn to generalizations, profiling and stereotyping to screen out

potential perpetrators instead of watching for behaviors, we put the workplace in much more danger of experiencing violence.

"Violent Perpetrators Just 'Snap' With No Warning or Clues"

This simply isn't true. It's very rare for violent incidents to happen without any kind of recognizable warning behaviors. They could be odd behaviors, obsessions, ominous statements, threats, escalation of conflict with other workers and other warning signs.

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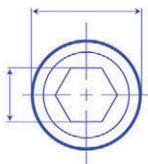
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ND MICROSPHERES® TA PRE-APPLIED THREADLOCKING MATERIALS by Jim Barr, Vice-President

ND Industries specializes in the development and production of innovative materials which increase the safety and reliability of fastener assemblies. ND Industries applies materials onto customers' fasteners in order to provide locking, sealing, lubricating, or masking features. One such product line is ND Microspheres® TA Series of threadlocking materials. ND Microspheres TA Series are dual microencapsulated, room-temperature-curing adhesives that can be applied to male or female threaded fasteners of virtually all sizes, configurations, materials and finishes.

Dual microencapsulation – resin capsules and activator capsules in a binder solution – results in a product which is less susceptible to environmental conditions than the single-encapsulation alternatives. The cross-linked molecular structure of ND Microspheres TA products creates a resistance to numerous chemicals. Oil, gasoline, salt spray, acids, most solvents, and water have virtually no effect on locking ability, once a final cure has been achieved.

The adhesive mixture is activated when a fastener coated with Microspheres TA is screwed into its mating part. The forces of engagement crush the microscopic capsules, mix the separate reactive components, and initiate a chemical reaction which locks the parts together. Under typical conditions, ND Microspheres TA Series materials have a fixture time of five minutes, with a full cure in 24 hours. ND Microspheres TA products give consistent and predictable torque values and require no heat or primers for curing.

ND Microspheres TA Series offers three formulas to meet differing needs.

- ▣ TA300 – Low-strength
- ▣ TA800 – High-strength / high-temperature
- ▣ TA850 – High-Temperature, with torque tension control.

Having ND Industries apply Microspheres to fasteners saves time and money, and improves quality control. Fasteners coated with ND Microspheres can be automatically fed through standard feeding devices - speeding the assembly process and improving productivity. The bulk pre-application of ND Microsphere products to fasteners is less expensive than hand applying bottled thread locking compounds at the point of assembly. It also eliminates the need for costly lock washers, cotter pins or castellated nuts. Pre-Applied ND Microspheres fasteners are coated to specification, ensuring consistent performance.



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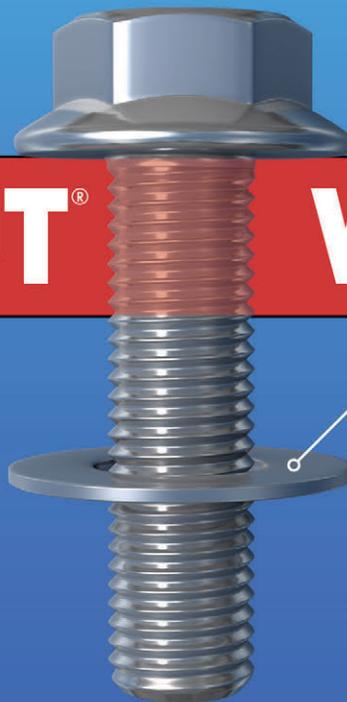
Fasteners with pre-applied ND Microspheres are dry to the touch and ready to use whenever needed. The material has an on-part life of four years and remains inert until activated by engagement with a mating thread.

ND Industries can apply ND Microspheres TA to fasteners at any one of its regional service centers. ND's divisions are strategically located near metropolitan industrial centers to reduce shipping time and cost, and provide better customer service and support.

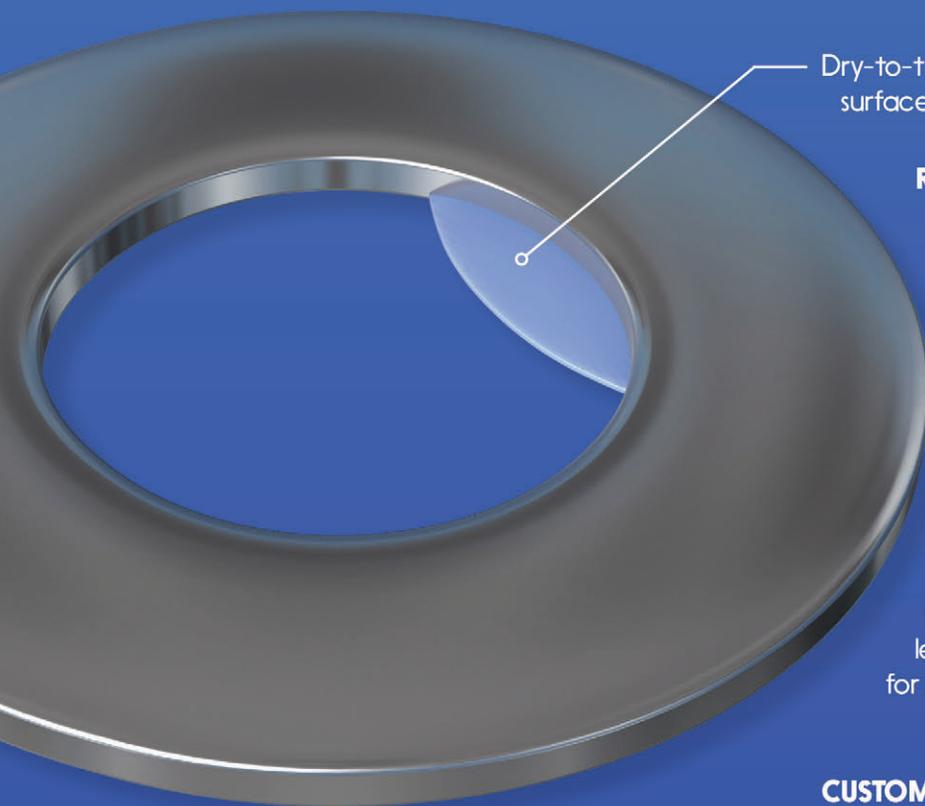
To learn more about ND Microspheres or the wide variety of applications for fastener locking, sealing, lubricating or masking, visit the ND Industries website. 

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Increase the efficiency of your assembly process with the Stay-Put Washer from ND Industries. Designed as a retention aid, Stay-Put Washers are used to hold a fastener or multiple components in place before final assembly.



Unlike plastic retaining washers, Stay-Put Washers are metal, allowing for proper load distribution. Stay-Put Washers exhibit a low installation force while still providing excellent retention of the washer to the threaded fastener.



Dry-to-the-touch, flexible polymer, bonded to the inner surface of a washer.

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CONVENIENT: No need to manually hold a washer in place while working over head or in hard to reach locations. Fasteners can now be pre-assembled and staged for final locking.

CLEAN: Stay-Put Washers are dry and will not leave behind any residue. They can also be stored for up to 2 years from the date of manufacture*.

PRE-APPLIED: As with all our Pre-Applied products, ND Industries can modify your washers to make them self-retaining at one of our regional service centers, or we can supply you with completed parts.

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* when stored under ideal conditions (4 to 32°C, or 40 to 90°F).



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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 DO MY EMPLOYEES NEED TO KNOW ABOUT CYBERSECURITY?

A cybersecurity awareness culture is critical to the success of your company. Employees need to understand how their actions positively and negatively impact the cybersecurity posture of your company.

If you are not educating your employees on cybersecurity best practices, you are missing the biggest opportunity for improvement in your entire cybersecurity profile. Your employees have business-need access to a lot of important data, and their ability to protect that data—or to inadvertently let it walk out the door of your organization—is strong.

Lack of education was at the heart of a number of incidents of a major security breach. You have probably heard about the new HR employee that got an email from the president of the organization asking for all the W2 information on every employee, so that person sent them exactly as instructed. The employee did not recognize the fact that the email came from a hacker impersonating the CEO, and a major security breach took place.

Entire business models are based on this kind of fraud. Let's pretend that I am going to build a site with the world's best collection of cute pet pictures. I'll give you the first 10 for free (and those 10 are the most adorable pictures you have ever seen), but to see more, you need to set up a username and password. The access is still free, though.

No big deal, right? Wrong. In this scenario, I own this

website and I am a criminal, and my business model is to try to use the username and password you just entered at every major banking website, on all major email providers, on your company's VPN portal, and anywhere else that I think you might have used the same username and password. I will then extract any valuable information I can from those sites, sell the information for a profit, possibly ransom your own data from you to make even more money, and then move on to the next victim.

Need some numbers to illustrate why educating your employees about cybersecurity



practices is important?

▫ Per IDG's 2016 Global State of Information Survey, 48 percent of data security breaches are caused by acts of malicious intent. Human error or system failure account for the rest.

▫ According to the Ponemon Institute, 60 percent of employees use the exact same password for everything they access. Meanwhile, 63 percent of confirmed data breaches leverage a weak, default or stolen password. So where can your company start? Start with a training program. Your employees need to be educated on cybersecurity best practices.

So where can your company start? Start with a training program. Your employees need to be educated on cybersecurity best practices. One of the issues that any cybersecurity awareness training program should address - **implement real password policies.**



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Since 1990 Sems and Specials Incorporated has continually worked to improve our Quality Management Programs. With that value in mind, Sems and Specials Incorporated is proud to announce on **January 17, 2018 we received our IATF 16949:2016 Certification.**

The IATF 16949:2016 Certification is an internationally recognized standard awarded to manufacturing companies having an Outstanding Quality Management System.

This provides for continual improvement and emphasizes defect and waste reduction through manufacturing consistencies.

Sems and Specials Inc. has seen significant growth in distributors that service American, European, and

Japanese automotive subcontractors along with many other transportation related segments such as truck, agriculture, motorcycle, recreational vehicles and construction.

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BUSINESS FOCUS ARTICLE

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distributor news

Intercorp., an importer and master distributor of high-quality construction fasteners under the Strong-Point® and Strongcon® brands, has received a Product Control Notice of Acceptance (No. 15-0930.14) from the Miami-Dade Department of Regulatory and Economic Resources, certifying that their Strongcon® products meet Miami-Dade requirements.



“Intercorp has always had a great reputation for high-quality fasteners and this NOA from Miami-Dade validates that,” said National Sales Manager Law Winchester. “Being certified will give architects, engineers, contractors, specifiers, and others the confidence to specify our Strongcon products and know that they will meet all building code requirements. The SP headmark on our Strong-Point products now signifies that our products meet the highest quality standards for construction fasteners.”

The Miami-Dade Department of Regulatory and Economic Resources thoroughly examined Intercorp’s product information, test reports, calculations, quality control methods and other factors to ensure that the products are code-compliant. Miami-Dade Department of Regulatory and Economic Resources Enforces codes and regulations related to buildings and structures, zoning, activities that may impact the environment and enhances economic development.

Strongcon® Miami-Dade certified fasteners are available through construction distributors throughout the United States. *To find your nearest distributor, visit www.intercorpusa.com.*

For more information on Intercorp and their Strong-Point® brand of fasteners, contact them by phone at 1-800-762-2004 or visit them on the web at www.strong-point.net.



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WHERE QUALITY IS EVERYONE'S RESPONSIBILITY

Celebrating 25 Years of Manufacturing Excellence

The dream of a young Xu Pengfei was to be a taxi driver. His reasoning was that driving a taxi would give him the best chance to be warm in the winter and cool in the summer. Little did he know when he started out in a tool and die shop, that it would lead to him operating one of the largest fastener manufacturing companies in Asia.

Ningbo Jinding Fastening Piece Co., Ltd. (Jinding) has grown exponentially in the last 25 years. Mr Xu's plan for growth has always been centered around quality. At Jinding, quality is everyone's responsibility. Mr Xu takes this concept very seriously, even tying pay plans to quality performance. Jinding's ERP system allows for full traceability, necessary for lot control, but also a valuable tool to help identify human error. Mistakes become teachable moments that every employee learns from in

monthly training sessions.

Another part of Mr Xu's quality-centric growth plan includes equipment and raw material. Mr Xu regularly reinvests in his business to add the best performing equipment, such as heat treat lines from Germany and annealing furnaces from the United States. Frequent vendor audits, strong supplier relationships, and volume buying power, ensure a reliable source of high quality raw material. Combined with well-trained employees who are focused on quality, Jinding's strategy yields consistent, high quality parts for you. Whether you need socket head cap screws, flange bolts or hex cap screws, Jinding is ready to fulfill your volume orders.

Ningbo Jinding Fastening Piece Co., Ltd. is a manufacturer of sockets, hex cap screws and other high strength bolts. 

BUSINESS FOCUS ARTICLE

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NCFA 10th ANNUAL DISTRIBUTOR SOCIAL

Mark your calendar on Thursday, May 17th for the 10th Annual NCFA Distributor Social. It is unbelievable that this event has been running strong for the past 10 years! It all began at an NCFA Board Meeting discussing how we could try to recreate the cocktail hour at the Columbus Fastener Show from years past. Never did we imagine this would become the premier networking event in the Cleveland and surrounding areas for our industry! It is with the support of our supplier companies that this event is possible each and every year....so thank you!! If you own or work for a supplier company and are not taking part in the NCFA Distributor Social, you may want to ask yourself why. It is the most cost effective sales call you can make. You can send your entire sales team to one location to network with customers and/or potential customers.

We think the simplicity of this event is what sets it apart from anything else. For suppliers, there are no booths to set-up, or tables

to stand behind waiting for customers or potential customer to approach you. The format allows you and/or your sales team, to socialize with multiple companies

throughout the night. For our distributor guests, not only do you get to attend the NCFA Distributor Social for *FREE, you also get to talk to potential vendors and visit with current ones.

The beauty of the NCFA Distributor Social, is it's up to you how you want to utilize the unique

networking opportunity presented to you.

This year prior to the social, we have Mid-West Fastener Association joining us by hosting a print reading seminar earlier in the day. To keep with our simplicity theme, this event will take place in the same hotel as the Distributor Social.

For information on how to register for this event, please visit our website at www.ncfaonline.com/events.

Please be sure to complete the correct registration, as there are separate for suppliers and distributors. 



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PARTSBASE JOINS THE FASTENER SUPPLY CHAIN NETWORK™



PartsBase, the well known aerospace parts sourcing site, has joined the **Fastener Supply Chain Network™ (FSCN)** by Computer Insights, Inc. They are joining the major fastener distributors and sourcing sites as part of the growing network.

Other participating companies include, Brighton-Best International, Kanebridge Corporation, Stelfast, XL Screw Corporation, FCH, Nationwide and ILSmart.

Formal Introduction at PB Expo

The PartsBase Expo will be held in Fort Lauderdale, FL on May 16-17. There, the formal roll-out of the FSCN and the introduction of the **PartsBase Connection** will be announced to the aerospace industry.

Not Just Another Trade Show

PBExpo is not just another aviation trade show - it's a technology show for the aviation marketplace.

Bringing together buyers and sellers in the aviation, aerospace and defense supply chain is the ultimate goal of PartsBase. In addition to providing efficient e-commerce solutions for buying and selling aircraft parts, PartsBase understands face-to-face interaction is vital for building long-term business relationships. PBExpo expands the current virtual community into a live, interactive trade show.

When asked about the **PartsBase Connection**, "We



constantly look at new technologies to enhance the user experience on PartsBase. A direct API integration with Computer Insights, is a great opportunity to enhance



**GREG SCHMIDT,
PRESIDENT OF PARTSBASE**

the speed and accuracy in which we provide data to our common customer base," says Greg Schmidt, President at PartsBase. "As companies expand market share and compete in new verticals, we are always looking to help partners that reduce the inefficiencies in the current procurement process."

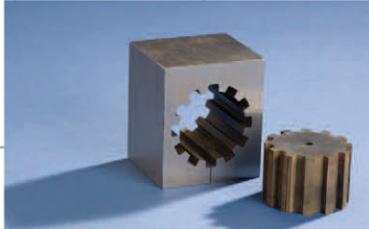
Dennis Cowhey, President of Computer Insights, said, "Whether your customer is going out to sea or into outer space you can find a supplier that has what they need while you have them on the phone. The new PartsBase Connection will get you a list of suppliers with the click of a button. Faster answers translate into more sales."



**DENNIS COWHEY, PRESIDENT
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Steven Sherman

Steven Sherman is Vice President of Industrial Rivet and Fastener Company, the manufacturer of RivetKing branded Permanent Mechanical Fasteners. Steven joined the company, which was founded by his great-grandfather, in 1998 as Production Control Supervisor after attending UC-Santa Barbara and Santa Barbara City College. With his multi-faceted experience that ranges from cold forming through to application engineering, Steven focuses on helping bridge the gap between suppliers and their customers. He regularly hosts seminars and training sessions to broaden the industry's knowledge and demonstrate the benefits and effective use of riveting technology.

DISTRIBUTORS BEWARE: REPLATING AND REPROCESSING RIVETS CAN WREAK HAVOC

Distributors aren't able to carry all the products a given manufacturer offers. So when market demand comes calling for something they don't have in stock, they may be tempted to rework the products they do have on hand to fit the need. The problem is they lack the expertise to account for every scenario or really to understand what went into the manufacturing process to begin with, and the result more often than not is serious quality issues.

For instance, in the past, it was commonplace for distributors to zinc plate nails and large diameter bolts together to save on plating costs. What these distributors found, however, was that this strategy was likely to cause damage to products as nail points became dull and were often being bent by the large bolts – potentially costing them not only money but customers as well.

Recently we've seen an increase in this type of reprocessing on rivets, which can be risky. There are certain products in particular where distributors should take extreme care, and even consider eliminating any internal reprocessing such as plating, waxing and painting even if performed by approved suppliers.

Rivets Using Engineered Wax

Take semi-tubular rivets, structural blind rivets and rivet nuts as an example. These products contain

engineered wax that should never be reprocessed. That's because even the best platers don't commonly stock these top-notch engineered waxes. Commercial platers generally think of paraffin-based wax as a one size fits all lubricant, but manufacturers actually formulate or specify their own wax and wax processes. Some of these waxes are PTFE fortified liquid while

others are PTFE lubricant solids in a liquid suspension. Others still have UV tracers in them to ensure proper coverage. There's a specific recipe for every product produced with wax that manufacturers guard closely as it provides a functional advantage over other manufactures. They consider how much wax should be applied, how it's applied, how much water and what type

of water should be used as well as what additives, ratios, heat and drying methods should be used. Perhaps most importantly, they also define how long a wax fluid should be used before it is removed from the tank. These formulations are developed based on the manufacturer's expertise and understanding of how the rivet will be used, and each has its own distinct advantages. Some function better than others in automation equipment while others work with certain anvils/tools, for instance. Conversely, there are also products where no wax should be applied – and if it reprocessed, the rivet will not work.



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Greg Norton and Mike D'Agostino, owners of the corporation, are proud of their expanding client base, while maintaining excellent support and service to current customers: "Everyone is a customer to somebody. It's simple: treat customers the way you want to be treated,"

says Greg. Mike also comments, "If a company is not constantly expanding product lines and offering new services, the business will eventually fail."

What makes Strut & Supply unique is their product offerings. Specializing in Weldless steel connections for commercial, OEM and construction industries, there is no need for drilling or welding. Because of this, connections are adjustable and are faster and easier to install than traditional methods. Customers include metal framing installers and contractors, steel and structural steel engineers, fabricators, and repair shops, and fabricated steel erectors, repair, renovation and restoration companies. In addition, Strut & Supply provides Girder Clamp components for clamping steel sections together, adjustable beam clamps for flanged beams, and expansion bolts for installation when only one side of a Hollow Structural Section (HSS) can be accessed. 

BUSINESS FOCUS ARTICLE

STRUT & SUPPLY



distributornews

American Imperial Screw

Corp. is now carrying a full line of Brass Knurled Shoulder Thumb Screws. We stock 6/32, 8/32, 10/32 and 1/4-20 diameters in various lengths and finishes including plain brass, nickel plate and black.

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For more information contact Jay at American Imperial Screw Corp. at 245 Quaker Road, PO Box 234, Pomona, NY 10970. Tel: 1-800 431 2391, Fax: 1-845 354 9100, Email: jay@discountscrews.com or you can visit them online at www.discountscscrews.com.

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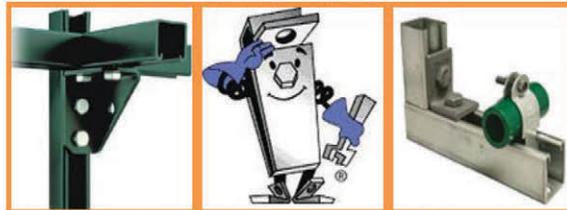


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SFA SPRING CONFERENCE & EXPO DALLAS, TEXAS - MAY 2-4, 2018

by John Elsner

The 2018 Southwestern Fastener Association Spring Conference and Expo is May 2 – 4, 2018. The Westin DFW Airport Hotel, 4545 W. John Carpenter Fwy, Irving, Texas will host the 2018 Conference. The conference kicks off with a welcome reception on Wednesday evening, May 2.

An after party is planned following the reception at Tolbert's Restaurant and Chili Parlor in Grapevine.



Enjoy the country sounds of Craig McDaniel, ND Industries and SFA Vice President, and his Band while you enjoy a famous "Bowl of Red" or any of the other delectable treats Tolbert's offers. The combination of atmosphere, food and the fantastic sounds of Craig McDaniel and his band is not to be missed. Tolbert's is a

short 5 minute drive from the Westin DFW Hotel.

Seminars and the annual golf outing highlight the activities for Thursday, May 3. Cyber Security will be the main seminar Thursday morning. A representative of the Dallas FBI Cyber Security Section will talk about the dangers and potential solutions in the Internet World today. The annual golf tournament is Thursday afternoon, May 3. The 1:30 P.M. Shotgun start will be at Tour 18 Golf Club, home of many famous replicated PGA golf holes from recognized courses throughout the United States. The traditional reception and dinner will close out the activities for Thursday at 7:00 P.M.

Friday, May 4 will see another round of educational seminars prior the Table Top Expo. A panel discussion by the Young Fastener Professionals will begin on Friday morning, May 4 at 8:30 A.M. Baron Yarborough, Spring Bolt and Nut and President of the YFP, will Moderate a panel discussion on "The Past, Present and Future."



Panel participants will be Tricia Dyer, All America Threaded Products, Jake Davis, BTM Manufacturing and John Longyear, Metric and Multistandard. The panel will take a look at where the fastener industry has been, where it is now and where it will be in the future. Mine Yucel, Federal Reserve Board-Dallas will follow with an Economic Forecast for the Energy Industry at 10:00 A.M. Ms. Yucel is an expert in forecasting the future trends we can expect for energy industry in the Southwest. No Distributor should miss her presentation.

Following of Ms. Yucel's presentation, a Deli Lunch Buffet will be available prior to the opening of the Expo at 12:30 p.m. The Expo will close at 4:00 P.M. The closing time has been moved up by one hour to allow participants time to catch desired transportation home on Friday evening and spend the weekend with their families. Registration forms for conference attendance and contracting for exhibit space are available from the SFA Office or on the SFA web site at www.sfa-fastener.org.

Also, 2018 scholarship applications are due by April 1, 2018. Applications can be obtained on the SFA web site at www.sfa-fastener.org. Applications can also be obtained by emailing swfa@swbell.net or faxing a request to 713.952.7488. SFA scholarships are available to employees and/or members of their families of SFA Members. 

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BEYOND THE MANUFACTURING: COMMITTED TO SERVICE

For the past 55 years, BTM Manufacturing has kept the commitment to customer service as their #1 priority. Throughout the decades, much in the manufacturing industry has evolved, however BTM remains adamant about product quality, a customer-first atmosphere, and exceptional service.

From BTM's first 320 square foot shop to the 100,000+ square foot manufacturing facility centrally located in Kansas City, BTM is well positioned to respond to rapid delivery and transit needs. Their products are proudly made in the USA from domestic steel.

"As the economy fluctuates, BTM's commitment to service is steadfast. As the landscape changes for technology and innovation, BTM's goal has always been to focus on a philosophy for customer-minded manufacturing. As more customers or OEMs look at outsourcing products and components of their products, BTM is remaining competitive by ensuring efficiencies in the manufacturing process," said Jake Davis, BTM Manufacturing President.

Our Commitment

With six decades of manufacturing experience in supplying specialty threaded fasteners and bent wire product to industries such as agricultural, automotive, truck-trailer, construction, and concrete, BTM customers can be assured of high quality parts and on time performance.



Quality

BTM continually strives for quality improvements in our raw material procurement, manufacturing processes and employee training. Streamlining of information systems, along with more effective data storage and accessibility are also areas of constant enhancement. BTM has been audited and recertified for ISO 9001:2008.

Products

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- ▣ Anchor Bolts
- ▣ Spade Bolts
- ▣ Studs
- ▣ Rods
- ▣ Custom Manufacturing



Case Study

This video case study highlights an example of BTM Manufacturing's secondary operations, including assembly, welding, bending, tapping, cutting, forging, drilling and heat-treating. The customer needed an effective solution that BTM has provided for over 20 years.

Check it out! 



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distributor news

Solon Manufacturing Company

announces that current president, J. Timothy Dunn will assume the role of Chairman of the Board and appoints Diane Popovich as its new company president, effective January 1, 2018. Popovich holds the first female executive position in company history.



With his transition to Chairman of the Board, Dunn will take an active role in providing leadership to the organization's officers and executives. Dunn joined Solon in 1979 after graduating from Ohio University. His career began in manufacturing as a lathe operator where he quickly developed his skills in operations and management.

“Diane's success in strengthening operational efficiencies throughout the company are invaluable to the growth of Solon,” said Dunn. “Her vision and leadership will continue to enhance the strategic growth and profitability of our organization.”

Popovich joined Solon Mfg. in 2015 as the Sales & Marketing Director, and became the VP of Operations in 2017. Serving the manufacturing industry for over 20 years, Popovich's experience managing and streamlining operations across the organization make her a natural choice for the position. Prior to joining Solon, Popovich served as Sales Director at Nook Industries in Cleveland. Diane graduated from Kent State University with a BS in Education, English. As President, Popovich will oversee all areas of the organization with a key focus on strategic planning and infrastructure. “I am excited and honored for the opportunity,” said Popovich. “I look forward to partnering with our incredibly talented team leaders to deliver the strategic objectives we have outlined to support Solon's mission and vision.

Founded in 1949, Solon Manufacturing Company is a global leader in the design and manufacture of Belleville springs, washers, industrial pressure switch products, and SF6 gas density monitoring equipment to industries in over forty countries.

For more information contact Solon Manufacturing Company by Tel: 1-800-323-9717, or visit their website at www.solonmfg.com.

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2018 MWFA FASTENER SHOW EXHIBITOR REGISTRATIONS ARE COMING IN by Nancy Rich

Enjoy a Show Where Proceeds are Returned to the Industry

Register soon for the 2018 MWFA Fastener Show (June 4th) featuring the industry's largest Table Top Show. This event will be sponsored by the industry for the industry in the heart of the fastener industry. Exhibitors, from across the country, will feature their products and services for the fastener industry. This is a premier event for sourcing new products as well as new vendors. The show will, again, be held at Belvedere Banquets in Elk Grove, IL. The facility is connected to the host hotel as well as surrounded by restaurants and bars making it very convenient for travelers to the show.

The show will be followed by the popular Fastener Bash. This is a great time to relax, spend more time with the connections made at the show, enjoy food, beverages and entertainment. This is the MWFA's 37th Annual Fastener Show.

On June 5th, the MWFA will hold their 66th Annual Golf Outing. This event will be held at Eaglewood Resort, less than 3 miles from the show venue. 7:00 a.m. and 12:00 p.m. shotgun starts will be available to accommodate all golfers and travel schedules.

Join us for this fun outing with several contests thanks to our generous sponsors. Not only will you have a fun networking day, there will be many opportunities to win door and/or contest prizes.

2017 MWFA Holiday Party

The MWFA holiday party held on December 14th at Medinah Banquets, was a great event with a collection of over 100 Toys and over \$2,400 in cash for the Toys for Tots program. Food and drinks were great but the joy of giving to Toys for Tots and association members getting together were some of the highlight of the evening. It was

apparent the members enjoy giving to Toys for Tots by their generosity.

Music That Moves provided fun music for listening and dancing pleasure as well as karaoke. Attendees enjoyed the music talent among the group. The karaoke contest allowed members to share their talent. Winners received VISA gift cards. Our winners included: Matt Delawder (SWD), Amanda Nell (Matenaer Corp.) and Steve Rogalla (Bradley Group). Thank you to all of them for sharing their talent!!

Santa was there to visit and take photos, with guests, at the Photo Booth. This year's new booth with an added social media kiosk added to the fun. It was definitely an evening of plenty of food, beverages, entertainment and networking!

This year's holiday party is scheduled for December 13th. Remember, it's never too early to start shopping for your toys for Toys for Tots to be collected at December's Holiday Party!

2018 MWFA Calendar

April 13	Social Event
May 10	Heat Treating/Plating Seminar
May 17	Print Reading Seminar
June 4	Table Top Show Belvedere Banquets-Elk Grove, IL
June 5	Golf Outing Eaglewood Resort
August 13-17	Certified Fasteners Specialist Class
August 16	MWFA Mixer
September 20	Open House
October 18	Education Seminar
November 8	Dinner Meeting Scholarships & Elections
December 13	Holiday Party 

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- 4) *It's hard to use - too many steps in simple processes*
- 5) *Someone purchased your software provider - ongoing support & development of the software is in question*

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The most obvious types would be:

- ▣ Hex head (cap) screws and bolts
- ▣ Flange Screws
- ▣ Socket Screws

Those categories of fasteners are suitable for higher load duties, but each has subgroups for specific usage. What they all have in common are that the driving systems, head styles, etc., are based on vertical walls, meaning the walls are parallel to the fastener axis. That way, the “cam-out”, or the risk of the driving tool being pushed out while tightening, is not a factor. The socket or hex wrench does not need an additional axial force to do the tightening. Ergonomically, this is of great advantage since the assembler does not have to push down on the driving tool.

Before we decide whether we should use an external (i.e. Hex Cap Screw) or an internal (i.e. Socket Head) driver, let's keep in mind that there are some alternatives for the more common and standardized types.

For external drives we have, in addition to the regular hex head,

- ▣ Flange Screws
- ▣ 12-point (flange) head (double hex) screws
- ▣ 6-lobe or multi-spline flange screws

For internal drives we have, in addition to regular SHCS

- ▣ 12-point (double hex) screws
- ▣ 6-lobe or multi-spline screws
- ▣ Square drive screws

All those are suitable for higher driving forces (torques). We will not discuss the specific benefits of the 6-lobe, 12-point in this text, but there are some very valuable advantages to these designs. Products with these drives are not commonly available from standard inventories and may, therefore, require purchasing production quantities.

Let us now focus on selecting external or internal drive systems.

The external drive (*Fig 1A*), in this case a Hex Head, needs a certain amount of space or clearance to accommodate a driving tool, whether it is a hex socket, an open end wrench or an adjustable wrench (the latter two better stay out of production, but they are too often found in the tool boxes of a service mechanic).

An internal drive (*Fig 1B*) has its best advantages as shown here with the head counter bored to be placed

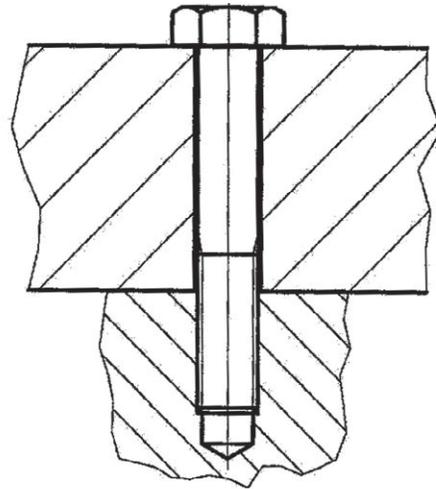


FIGURE 1A - EXTERNAL DRIVE FASTENER

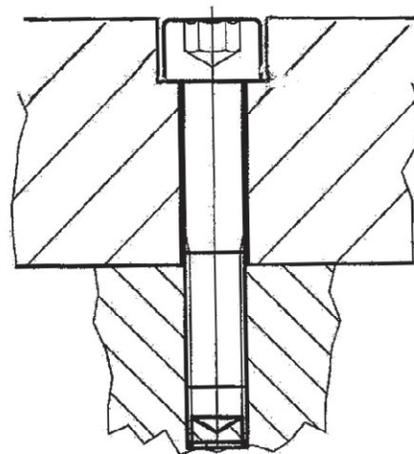


FIGURE 1B - INTERNAL DRIVE FASTENER

below the surface. For rotating machine parts this is a great plus because the screw head will not catch on anything. It does not need the clearance for the driving tool which means that we can avoid bending stresses more easily than when using external Hex heads. The down side of counter boring is that we lose some material thickness in the joint that could be used for clamping, making the joint less stiff.

Before we all “jump the gun” and replace all Hex Bolts/Screw with Socket Screws, there are some realities we need to consider. First of all, socket screws were not intended to be used as shown in Figure 1a even if we see them used that way. They were primarily designed so that they could be counter bored (Figure 1b) or countersunk (flat heads) to be flush with the surface. This is a very distinct advantage when we are dealing with rotating machine tools.

distributornews

Beacon Fasteners and Components has successfully completed the transition from the ISO 9001:2008 to the ISO 9001:2015 Quality Management System.

Beacon's drive and support from management and their operational staff paved the way to this achievement one year before the deadline.

"Hitting our transition target is just another example of Beacon's collective efforts to provide our customers the quality assurances required for their continued success," said Bob Wegner, President of Beacon. "This achievement also demonstrates the positive effects of our Quality Policy and Company Values."

Beacon's relentless pursuit of process improvement and customer satisfaction are critical components of their organization. They are proud of this certification as they continue to advance and exceed their customers' expectations with quality driven parts and services.

Beacon is the leading supplier of quality driven high performance screws focusing on Thread Forming, DIN 7500 Metric Thread Forming, Thread Cutting, SEMS, High-Low Tapping Screws, Sheet Metal Tapping, and Specialty Cold Headed Fasteners.

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The New England Fastener Distributors Association, (NEFDA) is pleased to welcome their newest members - Elgin Fastener Group - Brecksville, OH and Nelco Products Inc. - Pembroke, MA

NEFDA announces upcoming events for it's 2018 Calendar:

- ▣ June 7th - 29th Annual Scholarship Golf Outing, Oak Ridge Golf Club, Feeding Hills MA
- ▣ September 27th - Fall Fling Golf/Dinner Meeting, Northborough, MA
- ▣ December 5th - Holiday Party, High Rollers Bowling Alley Foxwoods Resort, Mashantucket, CT

For more information, contact NEFDA at 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.



FIGURE 1: CRACK FROM WIRE SEAM

The crack in Figure 1 is most likely the result of a seam in the wire. A seam is an artifact from the casting process where a void or small surface defect left from oxidation during the melting process is drawn out into an extended fissure on the wire surface during hot rolling. Although many machine operators and quality associates attribute cracks like that shown in Figure 1 exclusively to seams, similar cracks can be obtained from other drawing or hot rolling defects such as laps and scratches. In fact, manufacturers may create many of their own problems by exerting too little control over their wire handling and cold drawing processes and placing scratches in the raw material as a result of their own processing. Regardless of the source, however, it is generally a pretty good bet that a longitudinal crack has its genesis in an axial surface defect in the wire.

Figure 2 shows a shear burst. This type of crack can be distinguished by its characteristic 45 degree slant. Shear bursts are characteristic of material overload, or, simply, the inability to withstand the stresses that are



FIGURE 2: SHEAR BURST

exerted on it during the forming process. These bursts are caused by a wider range of possibilities than those attributed to wire drawing defects. They can be the result of overload (trying to do more than the material is capable of), poorly designed tooling, hard spots in the raw material, inclusions in the raw material, surface defects or stress risers including scratches, voids, seams, laps, and even head markings, or any other condition which might create a stress riser or locally reduce strength at the surface. Normally these bursts are catastrophic, rendering the parts unsightly or unusable.

Figure 3 shows a forging crack. These exist in areas of high stress concentration such as the corner of the internal hex in this example. These are common in parts with both internal and external features that exhibit areas of high localized stress concentrations.



FIGURE 3: FORGING CRACK AT EDGE OF RECESS

Figure 4 shows a part that exhibits quench cracking. Quench cracking is more likely to occur in high alloy materials, although plain carbon variants are not entirely immune. Quench cracking is the result of the transformation of the high temperature phase of steel, Austenite, to Martensite during the quenching process of a heat treatment cycle. In essence what happens is that the underlying structures consist of a different arrangement and packing of their atoms. Martensite is a Body Centered Tetragonal structure which is larger than the Austenite's Face Centered Cubic structure.

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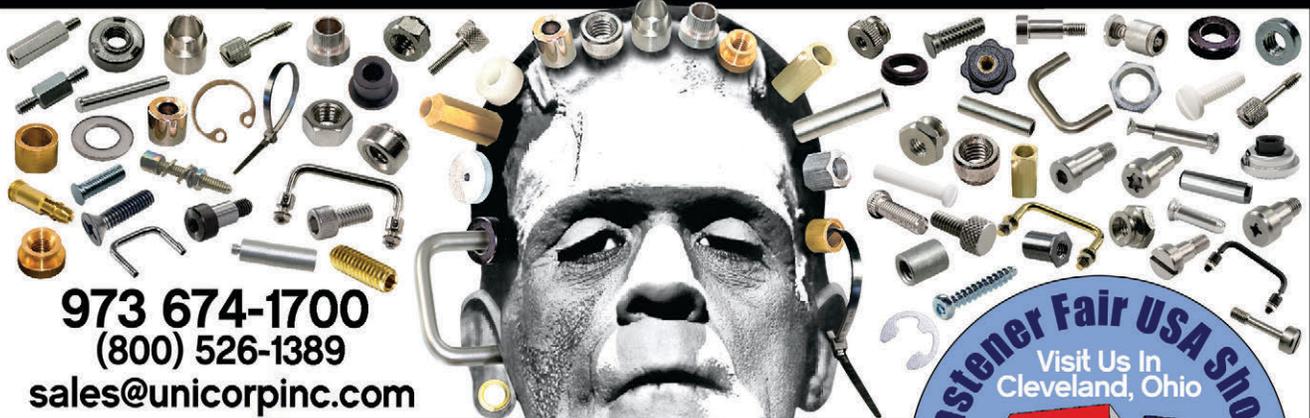
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Flanged gasketed joints are also very susceptible to joint loosening from gasket compression and relaxation as well as from the thermal relaxation of the bolts. Many flange assembly kits have ASTM A 307A bolts and SAE Grade 2 nuts. However, the IFI and ASME specify using the A 307B bolts for flange applications along with the A 563 Grade A heavy hex nuts.

Ferrous fasteners expand and contract much slower than the common heat conductors of copper and aluminum. Therefore, embedment is likely to occur, followed by joint relaxation and a loose connection. Then, there is the galvanic reaction between steel and aluminum that must be avoided, which will require fasteners made of silicon bronze, nickel alloys, stainless steels, or other expensive non-ferrous material. Most of these non-ferrous materials are not supplied in the form of a locking nut unless they are specially made.

This is where the Belleville spring washer becomes extremely useful. One of the unique properties of these spring washers is their ability to produce different loads and/or deflection by how they are arranged; single, series, parallel or stacked. How these are to be used and assembled is what confuses users and makes them unsure of how to use these spring washers.

Belleville spring washers can come in various sizes and thicknesses, so what is needed to determine the type of Belleville spring washer to use is the diameter of the bolt, the temperature range of the application to determine the correct material, then the 'flat' load or torque that is required when the bolt is tightened.

Typically, a Belleville spring is installed under the nut, with the ID of the spring against the nut and the OD against the joint surface. The spring washer can also be installed under the bolt head or may even have ne installed at both ends. When the joint material is soft, like aluminum, it is advisable to use a hardened flat washer under the spring washer to prevent the edges of the spring washer from digging into the softer material and

assure complete compression.

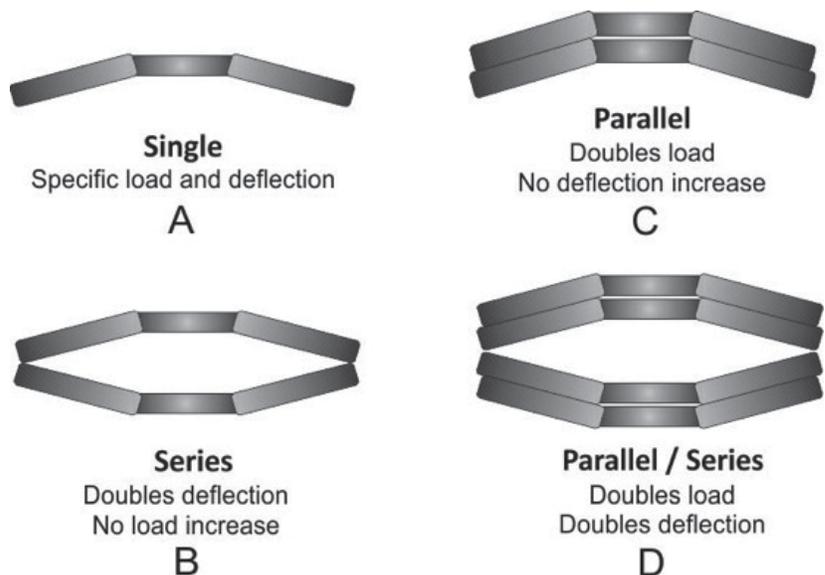
It is also common for the Belleville spring to be completely compressed to flat when tightened: it will not damage the spring tension ability. However, it may be of concern in a high cyclic application.

The following examples will help determine how many Belleville spring washers are needed and how they may be stacked.

Using the following illustrations as an example; let us examine one spring washer (A) with a flat load of 500 pounds producing a deflection of 0.020." Two of the same spring washers stacked in series (B) would also have a flat load of 500 pounds, but would have a deflection of 0.040." Therefore, if the thermal expansion was significant, the greater deflection rate would compensate and keep the load constant on the joint.

Stacking two spring washers in parallel (C) would increase the flat rate load to 1,000 pounds but maintain a smaller deflection rate of 0.020."

Stacking four Belleville spring washers together in parallel and series would produce the same 1,000 pound flat load and increase the deflection to 0.040."



The ability to use the same Belleville spring in multiple ways makes it very versatile. It is also very important to know how stacking the springs work because stacking them incorrectly can drastically change the amount of load or deflection attained after the bolt has been tightened. 

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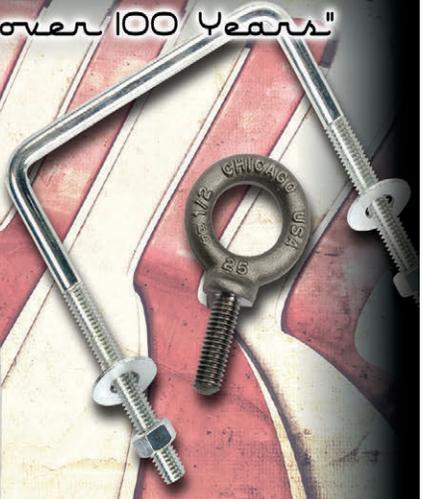
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ICHARD HAGAN FASTENER COMPANY ACQUISITIONS COMPLETED DURING THE SECOND HALF OF 2017 *from page 14*


On July 13, 2017, **MW Industries Inc.** purchased **Tri-Star Industries Inc.**

("Tri-Star"). Founded in 1991 and located in Berlin, Connecticut, Tri-Star is a manufacturer of standard and custom designed threaded inserts for plastic, along with made-to-print, precision machined components. Tri-Star supplies more than 500 customers in industries including automotive, electronics, communications, medical equipment, hand tools and the US military. Founded in 1973 and headquartered in Rosemont, Illinois, MW Industries manufactures a diverse range of engineered mechanical components including springs, precision stampings, wire forms, metal bellows, specialty fasteners and precision machined parts. The company is comprised of 21 manufacturing business units (before the Tri-Star acquisition) spread across the United States. Tri-Star is MW Industries' fifth acquisition since January 1, 2015. MW Industries is a portfolio company of Genstar Capital LLC, a San Francisco-based private equity firm with more than \$5 billion of committed capital under management.

Purchase price: not available



On July 14, 2017, **Indutrade AB** purchased **Young Black Industrial Stapling Ltd.**

("Young Black").

Founded in 1979 and located in Swindon, England, Young Black is a distributor of collated fasteners and pneumatic nailers & staplers used for construction and general industrial applications. The company stocks and sells a broad range of pneumatic tools which are marketed primarily under the Max® and Montana® brand names. Young Black generates annual net sales of approximately £10 million (US\$13.2 million) and employs 30 people. Indutrade (Nasdaq OMX Stockholm: INDT) manufactures and distributes a diverse range of industrial products including flow control systems, pumps & compressors, hydraulic & pneumatic products, transmission & automation systems and highly engineered mechanical components. Founded in 1978 and headquartered outside Stockholm, Sweden, Indutrade is comprised of more than 200 business units and employs more than 5,500 people worldwide. In calendar 2016, Indutrade generated net sales of SEK13.0 billion (US\$1.55 billion).

Purchase price: not available



On July 17, 2017, **Big Shoulders Capital LLC** ("Big

Shoulders") purchased **Anderson Manufacturing Co. Inc.** ("Anderson"). Founded in 1976 and located in Bristol, Wisconsin, Anderson manufactures screws, rivets, pins and other cold headed specialty parts for the automotive, electronics, medical, appliance, furniture and hardware markets. The company operates from a 52,000 square foot manufacturing facility, employs approximately 50 people and runs three shifts daily. Anderson was acquired by Rockford Products Corp. in December 2015 and Rockford Products subsequently went out of business in September 2016. Founded in 2013 and located in Northbrook, Illinois (a Chicago suburb), Big Shoulders is a privately-owned investment firm which specializes in business turnarounds and non-traditional restructuring financings. Following the transaction closing, Big Shoulders brought back the former president of Anderson and intends to invest additional capital in the company to support future growth.

Purchase price: not available



On July 21, 2017, **AFC Holdings Inc.,** doing business as AFC Industries, purchased

Best Bolt Products Inc. ("Best Bolt"). Founded in 1981 and headquartered in Indianapolis, IN, Best Bolt is a full-service distributor of fasteners and Class C components, supplying an OEM customer base. The industries served by Best Bolt include trucks & trailers, heavy equipment, lawn & garden equipment, agricultural equipment, pumps & valves and electronic equipment. The company employs around 20 people and operates branches in Brazil, Indiana and North Carolina. Founded in 1967 and headquartered in Bridgeville, PA, AFC Industries is a full-service distributor of fasteners and Class C components, specializing in providing its OEM customer base with advanced supply chain management services. AFC Industries has been highly acquisitive over the past few years and was comprised of six business units prior to the purchase of Best Bolt: i) Advanced Fastener (Ohio); ii) Dell Fastener (Pennsylvania and Georgia); iii) Gateway Fasteners (Pennsylvania); iv) Eckart & Finard (Connecticut); v) R&E Fasteners (Nevada); and vi) Accurate Fasteners (Massachusetts). AFC Industries is a portfolio company of Incline Equity Partners, a Pittsburgh-based private equity firm with more than \$900 million of committed capital under management.

Purchase price: not available

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JOE DYSART THEY DID IT: THE FREE AND OPEN INTERNET IS DEAD FOR FASTENER DISTRIBUTORS *from page 24*

But many of those following the FCC's ruling most closely – including major content providers like Facebook and Google – say your fastener distributors and others will take a major hit on how it gets to advertise on their Internet and how it gets to use Internet services, thanks to the FCC vote.

Here's what's known for sure, based on the way the new FCC ruling is worded:

▫ Your ISP – be it Verizon, Comcast, Cablevision or a similar monolithic company – is now the bouncer at your doorway to the Internet: Your ISP now completely controls what content you will see, what content you won't see, and how much it charges you for that privilege.

▫ Your ISP now has the right to charge major content providers – like Netflix, for example – extra to send movies to you: Should those surcharges start popping up, those extra costs are expected to translate into higher subscription fees. (Netflix, in fact, just raised its subscription rates for 2018.)

▫ Your ISP now has the right to charge fastener distributors and other businesses extra to use Facebook, Twitter, LinkedIn and any other social media site: You'll most likely be paying more to use social media, sooner or later. Plus, social media as an advertising medium could become less attractive for you, given that the major draw of social media among U.S. consumers is that accessing it has been free.

One example: In England, where Internet regulations are already less consumer friendly, Internet users pay extra to use social media, extra to view videos and extra to exchange messages with their colleagues and friends.

▫ Your ISP now has the right to charge you extra for YouTube: For years, YouTube has been an unprecedented boon for fastener distributors and other businesses, allowing them to post marketing videos there for free, and allowing those videos to be downloaded to their potential customers for free.

With the FCC's ruling, ISPs can completely trash that incredible deal for businesses, force YouTube to pay a

surcharge to them – and force YouTube to start thinking about charging you a fee to post your marketing videos there, too.

The same holds true for your favorite business services: Under the new rules, ISPs have the right to charge cloud service providers access to their customers – customers like you.

▫ Your ISP now has the right to make your favorite content disappear: ISPs that are also in the content creation business (and there are a lot of those) now have the ability to simply make competitive content disappear. For example: An ISP looking to market a service where businesses can post marketing videos can simply choose not to offer YouTube on its services – or make it so expensive for YouTube to do business on its service, YouTube will forsake that particular ISP.

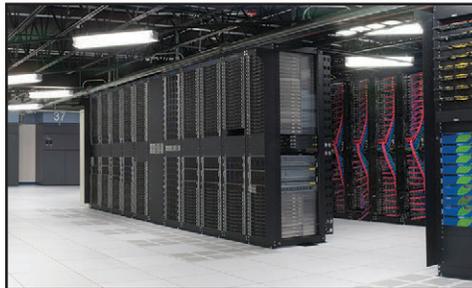
▫ Your ISP can now offer your deep-pocketed competitor, much faster, much more reliable content transmission to your customers: If you start noticing that your fastener distribution Web site seems to be downloading slower than your competitor's, and that the marketing videos on your Web site seem to sputter while your competitor's play flawlessly, thank the FCC.

With the new rules, your ISP can offer faster, more reliable transmissions to competitors who

pay for such premium service – and leave your company to slowly limp along, deliberately engineered to be an also ran.

▫ Your ISP has the right to thwart the emergence of fewer cool, new services: The major impetus behind the rise of social media and the easy access to an incredible array of news and entertainment on the Internet has been fundamentally founded on its free distribution model.

With Net Neutrality as the prime directive, anyone with an incredible idea and no funding could still go toe-to-toe against a corporate goliath with armies of creatives, lawyers and banks. The reason: With Net Neutrality, everyone had free and equal access to potential customers.



ABOVE: UNDER THE NEW RULES, ISPS COULD START CHARGING IBM EXTRA TO DELIVER ITS CLOUD SERVICES TO YOU.

BELOW: VERIZON -- ONE OF THE NATION'S MAJOR ISPS THAT JUST BECAME A GATEKEEPER TO THE INTERNET UNDER THE NEW RULES.



distributornews

Hodell-Natco Industries

acquired Davco Fastener Company on December 1, 2017. The move was a strategic one that gives Hodell-Natco a stronger foothold in the OEM market. Kevin Reidl, President of Hodell-Natco, worked together with Dave Potts, President and Owner of Davco Fastener Company on this mutually-beneficial transaction.

Hodell-Natco President, Kevin Reidl, views the acquisition as the perfect step in Hodell-Natco's growth strategy. "You don't often come across another business that is so wholly aligned to your own business both strategically and philosophically." From a product standpoint, the acquisition provides Hodell-Natco with very logical product line extensions. Davco Fasteners offers additional custom and specialized product lines which will allow Hodell-Natco to appeal to a broader customer base.

Reidl goes on to say, "The similarities between the two companies are profound." Regarding services, both companies are experts at key value-added services—especially vendor-managed inventory. There are also geographical overlaps in their service areas which will be key in making the transition

seamless to Davco customers. Both companies are family-owned businesses that take great pride in the personalized service they offer their customers. "Our shared values for integrity and strong customer relationships makes this more than just your typical acquisition. It's a true fit that accelerates our growth in the OEM marketplace."

As for Davco, Dave Potts explains that it took many meetings with interested buyers over several years before he made the decision that Hodell-Natco was the right buyer for his company. "Davco was being pursued for acquisition by a number of companies before I talked with Kevin at Hodell-Natco. After meeting Kevin and getting to know his values and long-term business strategy,

this deal just made sense."

Potts acknowledges that his customers and suppliers have been critical to Davco's success over the years.

"It was important to me to be acquired by a company that would continue to service our customers with the same great care we have given them for the past 32 years." Potts says that he, his family and their employees are excited to be integrated with Hodell-Natco's team for years to come. "It really is the perfect fit."

For more information contact Hodell Natco Industries at 7825 Hub Parkway, Cleveland, OH 44125. Tel: 1-800-321-4862, Fax: 1-800-321-2144 or visit them online at www.hodell-natco.com.



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CARMEN VERTULLO HYDROGEN EMBRITTLEMENT IN FASTENERS CASE STUDIES - PART 2 *from page 26*

For hydrogen embrittlement failure to occur in bolts certain conditions must be met. These include:

- A source of hydrogen in the steel. This can be internal from processing or plating or external from the environment. Thus the terms Internal Hydrogen Embrittlement (IHE) and External Hydrogen Embrittlement (EHE).

- A susceptible material – this includes steel with a hardness above HRC 39 which equates to a tensile strength of over 180,000 psi for IHE. Susceptible material is considered a first order condition. Other conditions are secondary.

- High loads on the bolts – upwards of 70% of the materials specified yield strength.

- Time – when the source of hydrogen is internal failure can occur quickly, within a few hours to a few days, when the source of hydrogen is external, more time may be needed, weeks, months or even years.

If any one of these conditions is absent, the likely cause of failure is not hydrogen embrittlement.

Because the investigators were able to determine that the zinc plated bolting was not baked in accordance with the current revision of ASTM B633 they zeroed in on internal hydrogen embrittlement as the cause of the failure.



THIS PHOTO OF A SUBSEA OIL WELL COMPONENT WITH FAILED BOLTING APPEARED IN MANY REPORTS AND PUBLICATIONS, INCLUDING THE WALL STREET JOURNAL. THE STUDS ARE 3" IN DIAMETER.

In fact, there was one condition not technically present - the bolting material by specification was not at

a strength level above 180,000 psi or HRC 39 hardness. This should have ruled out IHE as a cause. However, further investigation showed that some of the bolting was in fact out of specification and had hardness levels exceeding HRC 39. This further reinforced IHE due to improper baking as the cause of failure in the minds of the investigators.

The bolting supplier used an older version of ASTM B633 – 1999, which specified 3 hours baking at 375 degrees F. Even if the current version of ASTM B633 were used, which specifies longer baking times, it would not have mattered, the hydrogen embrittlement still would have occurred. Baking time was not the cause of hydrogen embrittlement here. Although the zinc plating was in fact a major player in the source of hydrogen, it was not from the plating process.

The environment in which the subsea equipment operated was corrosive to the zinc plating. The corrosion process produces hydrogen. In addition, the equipment was protected from corrosion by a process using electric current which also generates hydrogen. These two likely sources of hydrogen were the cause of the failures, which would be classified as external hydrogen embrittlement.

Investigations showed several other contributing causes for some of the failures – overloading, micro-cracks at thread roots, inconsistent material properties, and higher than specified hardness of the material. However those failures that can be attributed to hydrogen embrittlement were not caused by these conditions or baking time. They were external hydrogen embrittlement failures caused by environmentally generated hydrogen that was produced by the corrosion of the zinc plating and possibly exacerbated by a cathodic protection system.

Although these are not new cases, there are many lessons to be learned from them and there are multiple alphabet soup organizations still studying them – API, BSEE, IFI, ASTM, even NASA had a report, in addition to the oil companies, drilling equipment manufacturers and bolting suppliers. One lesson that stands out is the proper application of plating specifications.

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JOE DYSART THEY DID IT: THE FREE AND OPEN INTERNET IS DEAD FOR FASTENER DISTRIBUTORS *from page 108*

No more. Under the new FCC rules, there's a good chance that the story of a kid who started a Web site in his dormroom – and later went on to become the CEO of the most influential corporations in human history, a corporation also known as Facebook – will become a rarity, if not just a seemingly fanciful tale from days of yore.

Essentially: Anyone with an incredible Internet idea will now have to pay your ISP major coin to see if it will fly on a statewide, national or international level. That pretty much leaves kids in dormrooms who have great ideas but no cash dead in the water.

* Your ISP now has the right to nickel-and-dime you in countless ways: We've all grown accustomed to paying our ISP one price each month for all the broadband service we care to consume. With the ISP ruling, ISPs now have the right to limit the number of hours fastener distributors and others spend on the Internet each month, and charge you a premium for additional usage.

Moreover, as the gatekeeper of all Internet content, your ISP also has the right to study which content and/or information services you use most – such as cloud

computing services – then hit you hard with surcharges if you want to continue to access those services.

▫ You're now completely at the mercy of your ISP, given that ISPs are generally a monopoly or duopoly in any given region: While the FCC's Pai has argued that a newly competitive marketplace with the new rules will safeguard consumers from ISPs that get unreasonable about its pricing or policies, reality suggests otherwise.

More often than not, consumers looking for reliable, high speed broadband service generally have only one or two companies from which to choose. And while satellite is often a third choice, satellite suffers from latency issues.

▫ We're not in Kansas anymore, and clicking our heels might not help: While a number of consumer watchdog groups, state attorney generals and Democrats in Congress have vowed to vigorously fight the new FCC rules, the hard fact is Congress and the presidency is currently controlled by the Republican party. And overwhelmingly, Republican party leaders currently think the new FCC rules are just ducky. 🍷

JOE DYSART

FASTENER FAIR UNIQUE EDUCATIONAL SESSIONS AND INDUSTRY INSIGHTS AT FASTENER FAIR USA *from page 28*

Distributors will appreciate the sales and marketing sessions sponsored by Earnest Machine Products company, featuring two recognized industry speakers.

Paul Reilly, author of "Value Added Selling," will present tips on improving sales tactics and driving more revenue to the business. Ian Heller of Modern Distribution Management (MDM), will be speaking about digital trends in distribution, marketing and the effect Amazon is having on MRO distributors.

"The line-up of respected speakers we have sharing their knowledge and expertise makes Fastener Fair USA a truly valuable experience for attendees," said Jessica Boweak, Exhibition Manager for Fastener Fair USA. "In addition, the strong support from Earnest Machine Products company with their sponsorship of the educational theater and networking lounge will help make this a show people won't soon forget."

Other Educational Highlights

▫ Phil Matten, Executive Editor of Fastener+Fixing

Magazine will be sharing "Perceptions from Across the Pond." He will look at the most significant trends and issues - global and local - affecting the European fastener industry. It will be a unique chance to compare notes, ask questions and explore concerns in both the U.S. and European markets.

▫ Technical training sessions will be offered by Gavin Brown of Michigan Aerospace Manufacturers Association, John Doda of APM Hexseal, Willem Sundblad of Oden Technologies, Dennis Stritter of Atotech, Liberato Pietrantonio of CJWinter, and Michael Mowins of Phillips Screw Company.

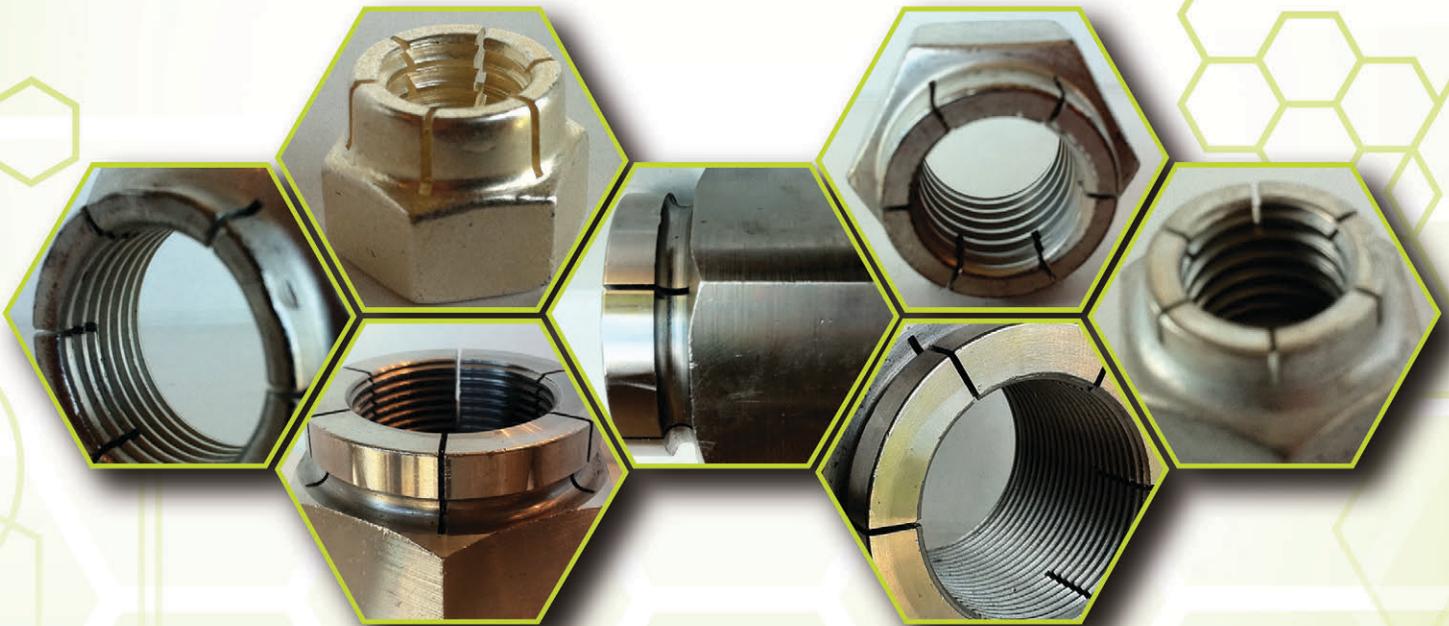
▫ Marketing and business management sessions will be offered by Young Fastener Professionals (YFP) and Women in the Fastener Industry (WIFI).

For more information about Fastener Fair USA, the educational session schedule, or to take advantage of early bird registration, saving 35% off exhibit hall entry pricing, visit www.fastenerfair.com/usa or call the office at +1 866-899-4728. 🍷

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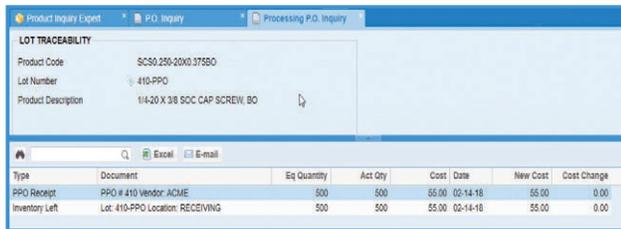
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OUR NAME SAYS IT ALL

COMPUTER INSIGHTS INC. HOW MANY W'S DOES YOUR SYSTEM ANSWER? from page 30

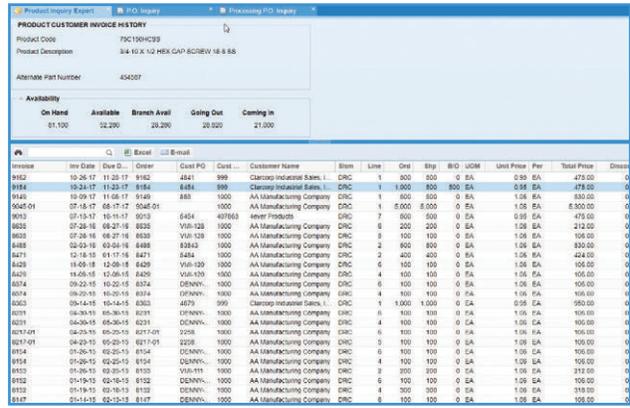
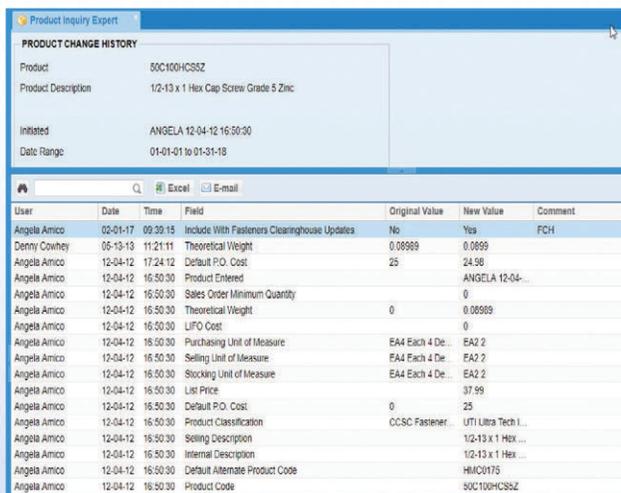
WHERE

The system should keep track of where the product is at all times, whether it is in-house or at a vendor's location. Many systems do not have any ability to track product once it leaves your warehouse. If it is in-house, you should be able to put your hands on it quickly. With the right information in hand, these are easy things to do. Without it, customers can go without needed information, purchasing could be ordering the wrong parts and warehouse personnel can waste endless hours trying to find parts.



WHEN

It is important to know when something happened as well as knowing who, what and where. This includes every imaginable change that might have happened to the part over the entire history of the part in inventory. With information like this, it is easy to get to the bottom of problem areas. Without it, trying to get things straightened out can turn into a finger pointing contest with no desirable outcome.



distributornews

Würth Industry North America (WINA) acquired structural fastener supplier Weinstock Bros.

Based in Valley Stream, NY, Weinstock Bros. has distributed structural bolts, tools and equipment for the construction of steel building and bridges since 1898. The company has supplied products that hold together some of the most iconic structures in the world, including Freedom Tower, Goethals Bridge, Atlanta Falcon's Mercedes-Benz Stadium, and Yankee Stadium. The transaction is the fifth in three years for WINA.

"I am delighted to have Marc Strauss, Nick Junjulas, and the entire team at Weinstock Bros., Inc. join the WINA group," stated Marc Strandquist, EVP of the Würth Group. "Their expertise in the construction fastener industry compliments that of Würth House of Threads based in Birmingham, and promotes continual growth for the WINA team within this specific industry."

"With Würth House of Thread's strong presence in the U.S. Southeast region and Central Mexico, and Weinstock Bros., Inc., located in the Northeast U.S., the acquisition will strengthen WINA's long term logistics strategy," Strandquist noted.

The combination is also expected to enable further specialization in the construction market.

Würth Industry North America (WINA) is a division of the Würth Group, the world's largest fastener distribution company. WINA is a strategically aligned collective of North American companies consisting of more than 110 locations. Through the pairing of more than 420,000 parts with a myriad of services, WINA provides custom solutions for almost every industry. Würth products and services include engineering assistance, quality control, inventory management, vending, safety supplies, kitting and assembly, structural fasteners and MRO/industrial supplies. WINA provides fasteners and C-Class parts through 105 branches in North and South America. Indianapolis-based WINA employs 2,000 workers and generated sales of \$800 million in 2017.

For more information on Würth Industry of North America and the Würth Group, please visit the website www.wurthindustry.com.

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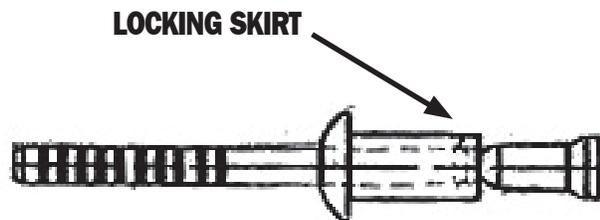
ANTHONY DI MAIO STRUCTURAL TYPE BLIND RIVETS from page 34

Multi-Grip is another advantage to the Monobolt and the Interlock Structural Blind rivets. One size rivet will accommodate many work thicknesses forces exist. Both having a locked portion of the mandrel in the set rivet body, avoiding the need to purchase many length rivets.

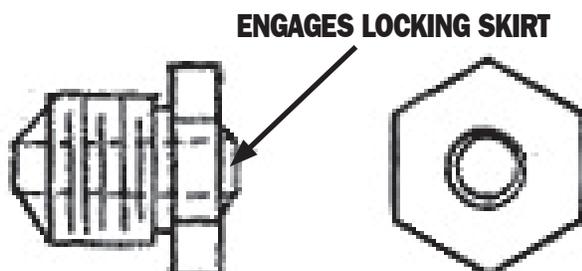
There are 4 sizes of Monobolts and Interlocks:

RIVET NO.	GRIP RANGE
64	.062-.250
67	.214-.437
86	.080-.375
810	.350-.625

There are 2 diameters the Monobolt and Interlock is manufactured to, and that is "6" = 3/16 (.187) Diameter and "8" = 1/4 Diameter (.250). If you set any one of the above structural blind rivets and set it in the following ways:- one with no work thickness and one at maximum grip range, you will see that the mandrel material inside the body of the set rivet, is at the same position in both rivet bodies. No matter what work thickness (within the grip range of the rivet) you are setting this rivet in, the mandrel locking feature will lock the mandrel in the same position and that is flush with the flange. This happens for the following reason.



The mandrel has a locking skirt. When the mandrel is being pulled by the setting tool to set the rivet, the locking skirt moves in the direction of the special nosepiece that is mounted on the setting tool.



This special nosepiece has a raised ring around the hole of the nosepiece that the mandrel is inserted into to set the rivet. The raised ring engages the locking skirt of the mandrel and flairs out the skirt into the body of the structural blind rivet. The locking skirt is forced into the inside wall of the rivet body as the setting tool pulls the mandrel and when the tensile strength of the mandrel is reached, the mandrel breaks. The mandrel breaks at the pre-determined tensile value and at a pre-determined breaking point of the mandrel.

The pre-determined breaking point, or breaking position of the mandrel, is a groove that has been formed into the mandrel diameter at a depth to determine the tensile strength of the mandrel.

No matter what the work thickness is, the locking skirt will travel to the special nosepiece. The nosepiece will flair out the locking skirt into the inside wall of the rivet body and the mandrel will break at the pre-determined tensile groove.

The multiple grooves on the mandrel shank, are there to prevent the pulling jaws of the setting tool from slipping. Some setting tools use two piece pulling jaws and other tools use a three piece pulling jaws. In either case, the theory is the same. The pulling jaws have grooves that contact the grooves of the shank diameter of the mandrel. The pulling jaws ride on a 10 degree angle that is in the jaw housing and the jaws also have a 10 degree angle. As the grooves of the jaws contact the grooves of the mandrel, the jaws will grip the mandrel. As the setting tool pulls the jaws, the jaws start to lock on the grooves of the mandrel and the jaws start to slide down the 10 degree angle forcing the jaws deeper into the grooves of the mandrel. The harder the setting tool pulls the mandrel, the deeper the jaws press into the grooves of the mandrel until the jaws have compressed themselves as deep as they can into the mandrel.

The Interlock structural blind rivet looks the same as a Monobolt structural blind rivet. The only difference between the two is that the Interlock has an internal locking grooves that lock the remaining mandrel in the set rivet. The Interlock can be set with a standard nosepiece, it does not need a special type nosepiece. 

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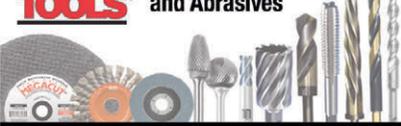
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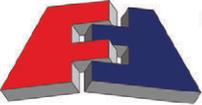


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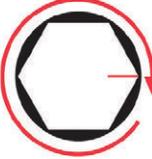
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STAFDA STAFDA'S FOCUS ON INDUSTRY EDUCATION from page 36

In 2019, Industry Insights will conduct STAFDA's other benchmarking studies: the Financial Performance Report, Distributor Profile, Rep Profile, and an Associate/Manufacturing Report.

STAFDA brings education to members' office with free monthly webinars. These one hour programs feature a business speaker for 45 minutes followed by a 15 minute question/answer session. 2018 topics thus far have addressed sexual harassment in the workplace, value-added selling, the new tax law, and hiring trends. Upcoming Q2 topics include strategic planning, an economic report, and how to be a great boss. Many members use the webinars as a springboard for post-webinar meetings and discussions.

But for distribution education, nothing tops the University of Innovative Distribution (UID). Held each March in Indianapolis, UID consistently attracts 600 people from all walks of distribution. The four day

program includes 43 different educational tracts where attendees create their own class schedule. Not only are the classes taught by leaders in the supply chain, but the other half of the 'education' comes from peers. Learning from others in a different line of distribution is priceless. Although there are industry-specific nuances, distribution is distribution! The commonality of distribution issues and concerns is pervasive through what's learned in the classroom and what's learned outside the classroom.

STAFDA also belongs to three organizations which provide education to its members: the Manufacturers' Representatives Educational Research Foundation (MRERF), the National Association of Manufacturers (NAM), and the Small Business Legislative Council (SBLC). With such a broad and diverse membership base, STAFDA strives to offer something educationally beneficial to each of its constituents. 

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MFDA HOLDS TOYS FOR TOTS FUNDRAISER by Nancy Rich

The MFDA held its 19th Annual Toys for Tots dinner and fundraiser in East Rutherford NJ. The largest crowd in the last four years attended the event, which was highlighted when Sargent Rainone of the US Marine Corps spoke to the members about his Company's mission to help underprivileged children, while at the same time keeping up with their other responsibilities for training reservists and being Honor Guards at Marine funeral. The Dover barracks along distributes tens of thousands of toys each year.

In addition to the hundreds of toys donated by its members, the MFDA Board presented Sgt. Rainone with a check for \$5000, which represents the cash donations made to the Toys for Tots drive by MFDA membership. The MFDA is proud to again be recognized as a National Corporate Sponsor of the Toys For Tots drive.

MFDA New Members

Accurate Components Corp. - West Babylon, NY
Intercorp - Fairfield, NJ

MFDA Calendar of Events

June 14th Scholarship Awards Dinner
booked at Al Di La Restaurant

September 15th Pre-Golf Outing Reception

September 16th MFDA 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
booked at Al Di La Restaurant

More dates to be posted later at the MFDA website at www.mfda.us. 

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Corrosion Resistance

Precipitation hardened stainless clinch fasteners provide extremely high corrosion resistance for use in challenging environments, including medical, foodservice, fluid handling, and marine applications, among others. The 400 Series stainless types will usually provide corrosion resistance comparable to zinc plated steel.

Fastener Types

Significant strides have been made over the years in developing “stainless for stainless” clinch fasteners to meet various application requirements, whether for basic component attachment, stacking or spacing, or enabling subsequent access to assemblies.

Today's marketplace offers designers precipitation-hardened stainless self-clinching nuts appropriate for stainless sheets with hardness up to HRB 90. Within the category of nuts, specific types carry advantages benefiting particular applications. They include types featuring reduced outer dimensions for close-to-edge installation, internally threaded floating nuts to compensate for mating-hole misalignment, nuts engineered to install flush in an assembly, and variations enabling installation in especially thin sheets or with locking capabilities, among others.

Stainless self-clinching thru-hole threaded standoffs and **blind threaded standoffs** made from 400 Series can be used in stainless sheets with hardness up to HRB 88. In varying lengths, these fasteners enable components to be stacked or spaced in an assembly. (Unthreaded types have been introduced for spacing multi-panel assemblies.) These fasteners are installed with heads flush with one surface of the mounting sheet and, using blind types, the outer sheet surface is both flush and closed. Additional types have been developed for installation into very thin sheets.

Traditional **stainless self-clinching flush-head studs** are intended for use in metal sheets of HRB 70



SELF-CLINCHING CAPTIVE PANEL SCREWS

or less. Newly designed **specialty stainless self-clinching flush head studs** for use in stainless sheets with hardness up to HRB 92 demonstrate very high hardness and corrosion resistance and mount flush in stainless sheets.

Stainless self-clinching panel fasteners (400 Series) represent a new generation of “access hardware” for stainless applications. These complete, spring-loaded assemblies meet UL 1950 “service area access requirements” and can be installed in stainless sheets up to HRB 88 (and as thin as .060”/1.53mm). A captive-screw design keeps hardware to a minimum and eliminates risk of loose parts.

Other innovations include stainless steel fasteners allowing for permanent joining of two metal sections and designed for use as a single flush-mounted pivot point. With all the fastener types and variables, designers can especially benefit from partnering at the outset with an experienced manufacturer to arrive at the optimum stainless solution. 



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BBI RECOGNIZES KEY INDIVIDUALS



Brighton Best International (BBI), an international wholesale distributor of fasteners, hand tools and safety products, would like to congratulate Stewart Weese, as he has been promoted to Warehouse Manager in Tampa. Stewart has been with BBI since 2008. Stewart has been an intricate part in the excellent service levels in the Tampa warehouse. His great work ethic and attitude will propel him to grow into an excellent Warehouse Manager. *You can reach out and congratulate Stewart at sweese@brightonbest.com*

BBI is pleased to announce the promotion of Frank Garza as Texas Regional Warehouse Manager. Frank has been a valuable part of our sales



team and will continue his growth in his new position. This challenging new position will allow us to use his sales experience in conjunction with our customer focused policies in the Dallas warehouse

BBI is pleased to announce the promotion of Tom Stocking to the position of Southwest Regional Manager. Tom is an industry veteran with over 20 years of industry experience. Tom will bring his knowledge of the market and passion for his customers to his new role. Please join me in congratulating Tom. Tom can be reached at tstocking@brightonbest.com.



BBI is pleased to announce expansion of the Strongville OH warehouse. The expanded facility is over 12,000 sq ft and will house over 35 million pounds of inventory. 

BUSINESS FOCUS ARTICLE

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JIM TRUESDELL COMPANIES CONTEND WITH HARASSMENT CULTURE *from page 40*

Employees in subordinate positions or with less assertive personalities may arguably need to be protected from those who would wield their power or dominance inappropriately.

It is important to understand that legal charges of sexual harassment can come in either of two ways. One is the “Quid Pro Quo” (this for that) situation where a person with a position of power sets forth a condition of accepting his or her advances in return for or with an implied threat that advancement, compensation, continued employment or favorable or unfavorable treatment will follow based on the subordinate’s acquiescence or non-acquiescence to the exploitive behavior. More often it is the other category of “Hostile Environment” that leads to complaints. When there is a hostile environment it means that the employer has allowed conditions to exist which unfairly make a person uncomfortable in their job environment. Examples might be sexually inappropriate language, jokes, pictures, leering expressions, wolf whistles or catcalls or other aspects of the work environment which are allowed to continue with knowledge of the management or which should reasonably have been apparent to management.

What can and should an employer do to avoid trouble and provide proper protection? Consider the following actions:

[1] Set forth a written statement of the company policy defining what kinds of sexually harassing behavior will not be tolerated. Have employees sign off on the policy. Include it in the employee handbook. Make it the subject of annual meetings where it is explained and the seriousness of it is emphasized.

[2] Make sure it is understood that the policy will be enforced and that there is zero tolerance for egregious behaviors. Serious infractions will lead to termination of employment for the offender. Management and Supervisors should clearly endorse the policy and refrain from making side comments or innuendos that the policy is overkill or silly.

[3] There should be a mechanism for employees to raise the complaints with designated members of management, both male and female representatives, to receive complaints and initiate an investigation. That investigation should be done with confidentiality to the extent possible to protect all parties, but the complainant should never be asked to keep the matter confidential since labor law may well protect their right to discuss conditions of work with co-workers. Take the

complaints seriously and investigate thoroughly

[4] Make sure that both accused employees and management in no way take retaliatory action against an accuser. In particular, discourage an accused from privately confronting his or her accuser until the situation has been resolved.

One unfortunate aspect of this whole change in culture is that it may negatively impact a close environment of camaraderie in a given workplace. It may run counter to the normal instincts of many people to bond with fellow employees with innocent congratulatory hugs, back patting, and the true non-sexual affection which naturally grows between people who interact daily in mutual efforts to build a successful business team. A lot of people are just “huggers” by nature and express congratulations, encouragement, empathy and other positive emotions by reaching out to touch their co-workers in a non-sexual way. Unfortunately (or properly from some people’s perspective) not everyone is oriented by personality to such physical displays. Therefore, despite one’s inclination, it is best for people in a work environment to avoid unnecessary touching except in very brief and properly formal instances of congratulations, sympathy, encouragement or bereavement.

I know this restraint may prove difficult for many of us who have been raised in expressive families, but in today’s new environment it is probably a necessary change in behavior.

Distributors, like all businesses, must be prepared to respond promptly to complaints of sexual harassment. This means having an employment lawyer versed in the applicable law to advise the company, making sure the board is kept informed of complaints which might arise so that they can be aware if even management is contributing to a dangerous culture, treating complainants with respect, and promptly investigating and resolving any allegations.

Discretion in all of our inter-gender workplace actions is certainly now the watchword of the day. Women certainly are increasingly expecting that courtesy from men and each of us needs to examine both our actions and our motivations to ensure we are not doing anything to make our workplaces less than welcoming and comfortable.

For those who manage our companies there is an extra strong imperative, not only for our own actions, but for the examples we set for others and the culture we foster in our companies! 

distributornews

DDI System, a leader in market-specific distribution ERP technology, has been named a "Top ERP Vendor to Watch in 2018" according to Solutions Review. DDI System's Inform ERP software provides a highly-configurable, industry-specific solution for wholesale distributors seeking operational benefits in accounting, inventory, sales, purchasing and pricing.

Solutions Review selected a short-list of ERP providers by focusing on analyst reports and the latest product enhancements and releases of innovative new tools.

"DDI System is thrilled to have been selected as a Top ERP Vendor to Watch in 2018," says DDI's Director of Marketing Jennifer Rosvally. "DDI's Inform ERP software is laser-focused on the challenges affecting today's independent distributors. Business systems need to go beyond operational excellence and provide new tools to compete in the digital marketplace. Inform ERP connects a multi-channel wholesale, showroom, and eCommerce world to drive growth. Industry-specific sales tools and features allow distributors to reach consumers 24/7 and tap into a real-time digital knowledgebase to respond and achieve results."

To take a product tour of DDI's evolving ERP technology, please visit www.ddisystem.com/demo and register for an upcoming webinar. For a product demonstration or more information calling DDI at (Toll-Free) 1-877-599-4334.

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distributornews

The NORMA Group, has joined the United Nations Global Compact Initiative. As a participant, the company, based in Maintal, Germany, is committed to the UN's 10 principles of Corporate Responsibility (CR), including respect for human rights, the elimination of corruption, discrimination, forced and child labor and the promotion of environmentally-friendly technologies. "We have long integrated the principles of the UN Global Compact into our daily activities," says Bernd Kleinhens, chairman of the Management Board of NORMA Group. "As an international company already involved in several local CR initiatives, we would like to reaffirm our commitment to responsible corporate governance on the global level."

For more information, contact The NORMA Group by visiting them online at www.normagroup.com.

Thinking Outside the Box

The better party planning solutions considered alternatives to the constraints offered. For example the restaurant had 4' tables that supposedly held only 6 people, yet with a 12'-6" circumference 8 people will fit comfortably for a short party. Renting 6' diameter tables with almost 19' of circumference would seat 10 for a buffet or family style dinner. More people per table means fewer tables and better utilization of space.

For my new Distributor friend his counting exercise verified that a 12,000 to 14,000 square foot building, 30' high would hold over 1,300 pallets of overstock and more importantly this "box" could be located anywhere convenient to his delivery and branch transfer truck route. Materials delivered to the offsite box can be transferred to the main location or branches at minimal cost and this will help avoid the main constraint of the limited existing site.

So now there is a new paradigm and a far simpler problem for the Architect. All that is required is a 120' wide (two bays of 60'-0") x 100' to 120'. Docks need to be strategically located, a drive in door would be nice and a simple heated and air conditioned office/washroom with a window to see outside completes the plan. Structurally only the front wall is essentially fixed and every other wall can and will be removed/reused for future expansion. This implies steel framing and a tall pre-engineered structure with a roof slope of 1/48 as an inexpensive and flexible solution.

Construction on bare ground without traffic and operational constraints means that costs and time losses will be minimal, making this far less expensive. But things potentially get even better. Instead of building a single user project on a tight land site this new building would be highly marketable if external factors change. Plus if there is a disaster at either location the proverbial eggs will no longer be in only one basket.

Thinking Even Further Outside the Box

The party problem is also influenced by non-layout

factors. A lunch served by staff requires less space than a buffet, but a lot more money. A valid and practical compromise is "family style" with bowls and platters brought to each table (saves time) and passed around by the guests. This can be a good solution for a casual event.

In the Distributor context one should change hats and consider things from a real estate investment perspective. The new back up inventory warehouse needs to be constructed on vacant land and in his situation the only real requirement is that a highway interchange should be nearby along with a potable water source and electricity unless the facility will be totally off the grid. In the US this provides a lot of leeway for "location, location, location." It also means that land might be plentiful and cheap. Instead of investing a large sum of money in the existing property far more land can be purchased for far less money. For our purposes let's say 20 acres, subdivided into two 10 acre parcels.

The initial building would then be carefully situated to maximize future expansion while taking full advantage of sight lines, topography and other factors. Doing this requires designing the ultimate structure of a real Distribution Center (DC) along with offices, showroom, customer service counter, etc. No matter how large the DC will be the initial structure will only be a tiny fraction of the final space and it might even serve an entirely different function. In three dimensional terms with a high ceiling adding column footings strategically under the floor is a cheap way of turning a warehouse into two story corporate office space.

Looking at the problem this way can also influence other structural decisions. Using a flat roof might be incrementally more expensive initially but offer greater possibilities for a solar collection field in the future. And a septic field location would at some point become a landscape feature. Similarly a decorative retention pond can also serve as a fire system reservoir. Building in this thinking now can save a fortune at a later date.

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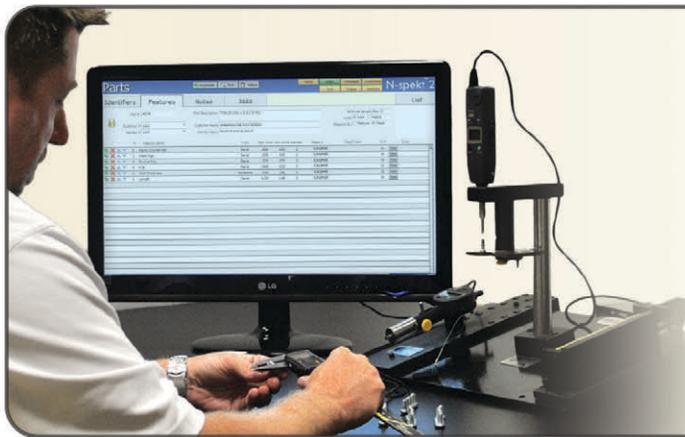
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▫ **ECONOMIC CONFIDENCE:** With 45.8% responding with a “High” level of confidence in overall North American economic conditions for 2018 and another 37.5% “Moderate.” Only 16.67% reported a “Low” level of economic confidence.

A lower percentage of fastener executives rated their confidence in the global economy for 2018 as “High.” While more than 45% pegged their North American economic confidence as “High,” only 16.7% were as confident in the global economy for 2018. A 70.83% majority had “Moderate” confidence vs. 12.5% pegging their level of confidence at “Low.”

▫ **POLITICAL CONFIDENCE:** The White House has the confidence on business issues of more fastener executives than the U.S. Congress. While 41.67% pegged their White House confidence at high, only 16.67% responded with “Low” confidence.

That makes more than 80% rating the current White House confidence at “High” or “Moderate.”

▫ By contrast, no End of 2017 FIN Survey participants rated their level of confidence on business issues in the U.S. Congress at “High” and 12% pegged it at “Low.” A simple majority gave Congress a “Moderate” grade.

Sampling of End of 2017 FIN Survey Comments

“Predicting cost changes is difficult because we don’t know what supplier may do as the year progresses. Some have raised prices slightly already; some have held steady.”

“Global steel prices from China Steel were up 21% on average year-over-year in 2017.”

“The industry seems strong currently. Our business on the specialty / forging side has been very strong, led by construction.”

“The corner store went away. Independent distributors will too.”

“Only robots can beat cheap labor in Asia.”

“Supply and pricing are going to be a challenge for all of 2018.”

“With the new Washington DC, we are in control.”

“The overall economic climate is positive.”

“Full of mystery! Overstated sales and profits!”

We asked the question: “What was your biggest company problem in 2017?”

“Revenue growth.”

“Government regulation / taxation.”

“Conglomerates driving out the independent distributors.”

“Rising costs from suppliers and challenges getting customers to accept increases.”

“Hiring skilled technical employees.”

“Imports.”

“Increased lead-times.”

“Deliveries.”

About the End of 2017 FIN Survey

A 54.55% majority of participants were distributors; 22.73% importers; 18.18% manufacturers; and 4.55% machinery. Participants reported fastener product sales ranged from 14% to 100%, averaging 55% of total company sales.

The number of employees ranged from 1 to 2,000, averaging 57.

The number of facilities averaged 5.4.

The FIN Survey has been conducted since 1979. 

WOMEN IN THE FASTENER INDUSTRY

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WOMEN IN THE FASTENER INDUSTRY ANNOUNCES TWO SPEAKERS FOR FASTENER FAIR USA

"WIFI is thrilled to host Gail Friedberg Vice President and co-owner of Zago Manufacturing and Christine Hunt Wellness Coordinator for Brighton-Best International at this year's Fastener Fair USA Expo and Conference in Cleveland OH," said Rosa Hearn, Board Chairwomen for Women in the Fastener Industry.

"These women are activist and leaders in their fields and their collective wisdom challenges us all to make the most of our own lives, talents and experiences—in short, to believe in our own power."

In years prior, attendees have benefited from the talent and wisdom of such trailblazers as Jennifer Johns Friel first woman to Chair IFI and President of Mid-West Fabricating; International business owner and President Simmi Sakuja of Stelfast Fasteners Inc. and many others that have offered attendees the chance to have one-on-one conversations with businesswomen and community leaders and intimate expert exchange sessions offer a focused discussion with industry veterans.



Gail Friedberg is Vice President and co-owner of Zago Manufacturing Company, Inc. For 25 years Zago has manufactured and sold sealing fasteners and components in Newark, New Jersey and was named Manufacturer of the Year by the New Jersey Manufacturers Extension Program (NJMEP) in 2017. Under Gail's leadership of Zago, and due to her commitment to



continuous improvement, Zago was Certified ISO 9001:2015 compliant. In addition Zago was recognized as a member of the New Jersey Sustainable Business Alliance and is committed to having a positive social impact on its community.

In addition to her leadership at Zago, Gail is a community leader and was elected to represent her fellow residents on the Fair Lawn, New Jersey Town Council in 2017. Gail has been active in her local community for over 20 years organizing PTA bookfairs, collecting food for children facing food insecurity, and organizing dinners for people in need in the community, including a Christmas Eve dinner for over 150 people.

Gail is a wife (of Zago co-owner Zahavy Rottenstrich) and a mother of three boys, Asher, Nathan and Dan. Gail believes that in order to be successful in business (and politics) women must create their own brand. Two of the most important elements of that brand are strength, gained by constantly tackling new challenges, and compassion.

Presentation: "Creating Your Own Brand"

As a woman in a male dominated field (the manufacturing industry in general and the fastener industry in particular) there are both challenges and opportunities. By creating your own brand, through networking, engagement in industry groups, social media platforms and even running for office, you establish yourself as someone. When you walk into a room of men, if you're not "someone" you're no one. And on your way to becoming someone, you'll have much more fun if you bring other women along for the ride!

ROTOR CLIP GOING SMALL IN A BIG WAY from page 50

Small wave springs are becoming the spring of choice for reducing the overall size of assemblies in a variety of medical devices. Rotor Clip is working to produce these parts at a diameter of 3mm, the lowest of any manufacturer in the industry.

Spiral retaining rings, like the one shown, can be produced to a diameter of 6mm offering 360 degree contact with the groove no matter how small the application.

Rotor Clip can also “Go Big” as the last image from one of their earlier catalogs demonstrates. The young lady is holding a large, 1000mm (40 inch) retaining ring noting that Rotor Clip can manufacture parts from 1mm to this size and everything in between. 





 ROTOR CLIP COMPANY INC.
JO MORRIS THE VALUE OF TRADE SHOWS...A GREAT PLACE TO LEARN from page 58

Understanding the Bolted Joint, instructed by industry leader Carmen Vertullo, is an interactive advanced seminar that will provide a critical foundation to learning how bolts work. Did you know that even Grade 8 bolts stretch when they are tightened, acting like heavy duty springs, and that is why they keep assemblies together? Learn why tension in bolts and screws is more critical than the applied torque in making a joint secure as well as what a Skidmore Tester is and what information it provides about fastening which is different from that provided by a torque wrench.



Attendees may register for either class at www.fastenerfair.com/usa/ or at www.fastenertraining.org. Show attendance is not mandatory to attend either FTI seminar.

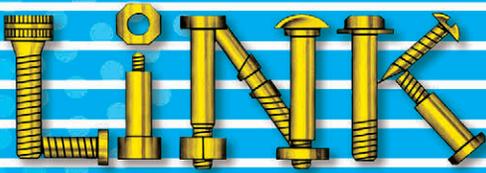
Become educated in the fastener industry so that you

can better support your customers and take advantage of all the resources trade shows offer. If your schedule does not allow a trip to Cleveland in April please join FTI in Michigan where Laurence Claus, Salim Brahim and Carmen Vertullo will instruct “Automotive Fastener Technology” and “Understanding Hydrogen Embrittlement in Fasteners.”

Automotive Fastener Technology is a two-day seminar that includes classroom instruction along with tours of both a heat-treating facility and a coating/surface finishing facility. Students will gain a better understanding of automotive fasteners through hands-on, case-based lessons. Topics include fastener tightening, fastener failure and fastener metallurgy.

Understanding Hydrogen Embrittlement in Fasteners is a two-and-a-half-day workshop that will provide a broad understanding of hydrogen embrittlement with a focus on the conditions leading to hydrogen embrittlement failure of high strength mechanical fasteners. 

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Large Diameter Pin Application Examples

Agriculture attachments – large diameter 5/8” slotted tension pin can replace a bolt, two flat washers, lock washer and nut, saving material costs & labor.

Agriculture Plow Joint – use M16, M18, and M20 large slotted tension pins.

Communication Dome – Slotted tension pins hold the pivot joints together. The size used was a 21mm diameter. The cost savings was in the fact that the tension pins not only acted as locating devices, but also secured the connection structure joints.

Material handling equipment mines – M18 pins are used to assemble the conveyor system. They replaced the bolt and nut application.

Forestry Heavy Duty equipment – Slotted tension pins are used in booms and bucket applications.

Construction bucket teeth – use slotted tension pins in 1/2” inch and metric M12 diameters.

The standard ASME B18.8.2-2000 slotted tension pins are stronger than a standard duty ASME B18.8.2 coiled pin. This would also be true when comparing ISO 8752 slotted to the ISO 8750 coiled pins. In fact standard slotted tension pins are stronger than the mild steel solid pins, taper pins, or grooved pins of like diameter. They can handle the hardest application demands. More strength, versatility for hole design, and ease of installation make the slotted pins a “go to” for many applications.

Made on state of the art punch press machines, the design possibilities are endless. We helped work on a crankshaft application to supply a special

replacement part in an ISO 13337 thin walled slotted tension pin to replace parts made back in the 1950’s. If you can think it we can build it for you!

Most holes can be drilled to tolerance without special tools. There is no need for the extra cost of reaming, threading or counter boring the holes. Standard hole size tolerances are all a published standard taking any of the guess work out of your design. The holes do not require the close tolerances of a solid pin and can be used where the holes of a solid pin have become worn as a replacement fastener.

Doubling Up for Heavy Duty Application

For additional shear strength, two slotted pins may be used in a combination-one pin installed into the other pin. This common practice makes the pins greatly stronger than the ISO 8748 heavy duty coiled pins or the ASME B18.8.2. It is important to have the slots staggered by 180 degrees. It is also recommended when using the a doubled up pin to have the hole size to the high side of the tolerance. The reason for that is due to the higher installation force required to push the doubled up pins into the application.

ISO 8752 Slotted Pins Verse ISO 8750				ASME Slotted Pins Verse ASME Standard coiled Pins			
Diameter	Double Shear ISO 8752 Slotted Spring pins (kN)	Double Shear ISO 8750 Coiled Pins (kN)	Double shear comparison of slotted pins verses coiled pins Medium Duty	Diameter	Double shear ASME B18.8.2 Slotted Spring pins (pounds)	Double Shear ASME B18.8.2 Medium Duty Coiled Pins (pounds)	Double Shear comparison of slotted pins verses coiled pins
1.5	1.58	1.45	8.2%	1/16	430	330	23.3%
2	2.82	2.5	11.3%	5/64	800	550	31.3%
2.5	4.38	3.9	11.0%	3/32	1,150	775	32.6%
3	6.32	5.5	13.0%	1/8	1,875	1400	25.3%
3.5	9.06	7.5	17.2%	5/32	2,750	2200	20.0%
4	11.24	9.6	14.6%	3/16	4,150	3150	24.1%
5	17.54	15	14.5%	7/32	5,850	4200	28.2%
6	26.04	22	15.5%	1/4	7,050	5500	22.0%
8	42.76	39	8.8%	5/16	10,800	8700	19.4%
10	70.16	62	11.6%	3/8	16,300	12600	22.7%
12	104.1	89	14.5%	7/16	19,800	17000	14.1%
14	144.7	120	17.1%	1/2	27,100	22500	17.0%
16	171.0	155	9.4%	5/8	46,000	35000	23.9%
20	280.6	250	10.9%	3/4	66,000	50000	24.2%

*M21 to M50 are not included since coiled pins cannot be made to those diameters.

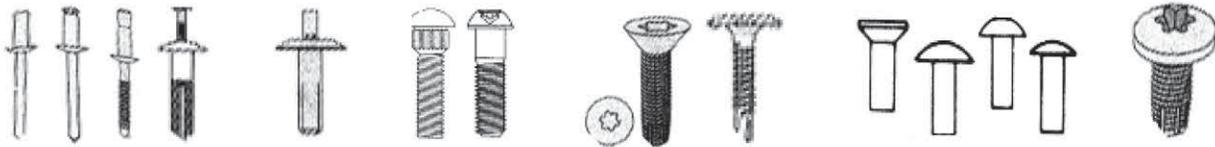


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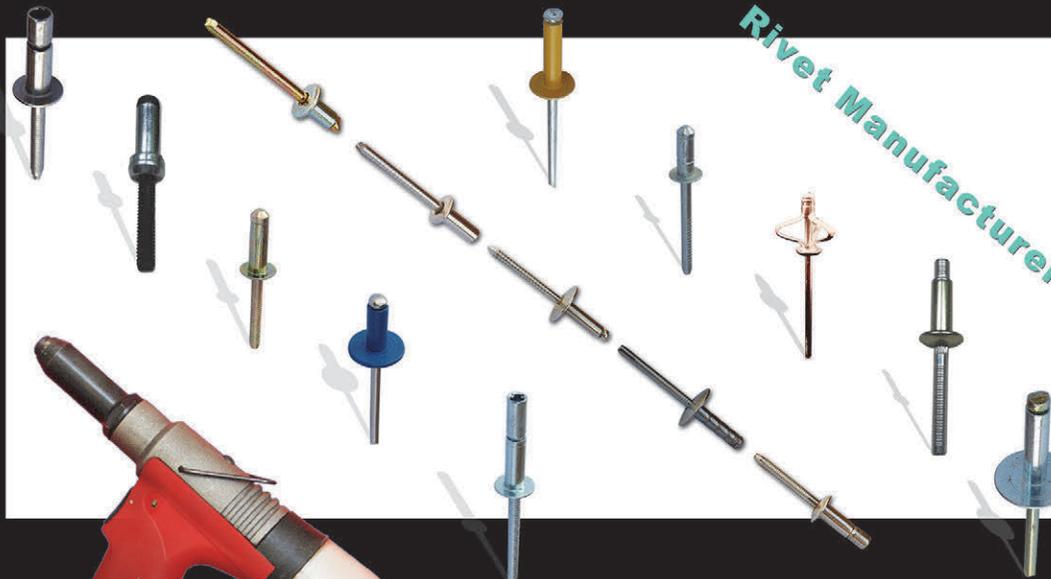
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High Quality in China

ROMAN BASI WHY GETTING YOUR COMPANY VALUATION IS IMPORTANT AND HOW IT WORKS *from page 62*

[5] Access to More Investors - When you seek additional investors to fund company growth or save it from financial disaster, the investor is going to want to see a full company valuation report. You should also provide potential investors with a valuation projection based upon their provided funding.

What is a Valuation?

The definition is “the price that a reasonable person would pay to own the future cash flows of a business less any debt owed plus all cash on hand.” There are a number of different ways to calculate the value of a business. Our valuations utilize 3 and sometimes 4 methods. We use an earnings calculation, an asset (including Goodwill) valuation, a cash flow valuation, and then a market or comparables approach.

Obviously, if you are selling your business, valuation is extremely important. However, valuation can and should be used as a powerful driver of how you manage

your business. The purpose of this estimated value is to track the effectiveness of your strategic decision-making process and to provide you with the ability to track performance in terms of estimated change in value, not just in revenue.

This helps you to take a holistic look at your business and make decisions that are highly impactful for your bottom line. It allows you to understand the subtle dynamics of your business and avoid unforeseen consequences of seemingly reasonable decisions. A value-based management approach will set you apart from your competition and dramatically change the way you and the market view your company.

Before deciding on selling or seeking more investors in your company a business valuation, bringing many factors together, will create an ideal environment in which sales or negotiations can take place. Additionally, a valuation can and should be used as a powerful tool on your management of your business. 

ROMAN BASI

GARY SHEELY 6 RISKY MISCONCEPTIONS ABOUT WORKPLACE VIOLENCE *from page 74*

“Only ‘Crazy’ People Commit Workplace Violence”

Not so. Only about 5% of profoundly mentally disturbed people are actually violent. And of that population, the majority are incarcerated or hospitalized. Most workplace violence is not committed by those who would be considered “insane.”

“Security Guards and Metal Detectors Will Keep Us Safe”

A dangerous myth. Almost anything can be used as a weapon by someone intent on causing another

person injury. The ability to commit workplace violence is not contingent upon smuggling a firearm past security. It has also been demonstrated that the presence of such measures only forces the perpetrator to be more creative in order to defeat them.

Here’s what you can do:

- Start by educating yourself. Do some reading. Talk to an expert. Have you subscribed to any of the myths mentioned in this article? Becoming aware of that is a great start.

- Pay attention to your people. Watch for changes in behavior, and learn which behaviors should command your attention.

- Revisit your policies. Are there any tweaks that could make your workplace safer? Get some good advice, if necessary.

The risk of workplace violence can be dramatically reduced with good information, good policies and increased awareness. 

GARY SHEELY

CROSSWORD PUZZLE

ALL THINGS MUST COME TO AN END

ACROSS

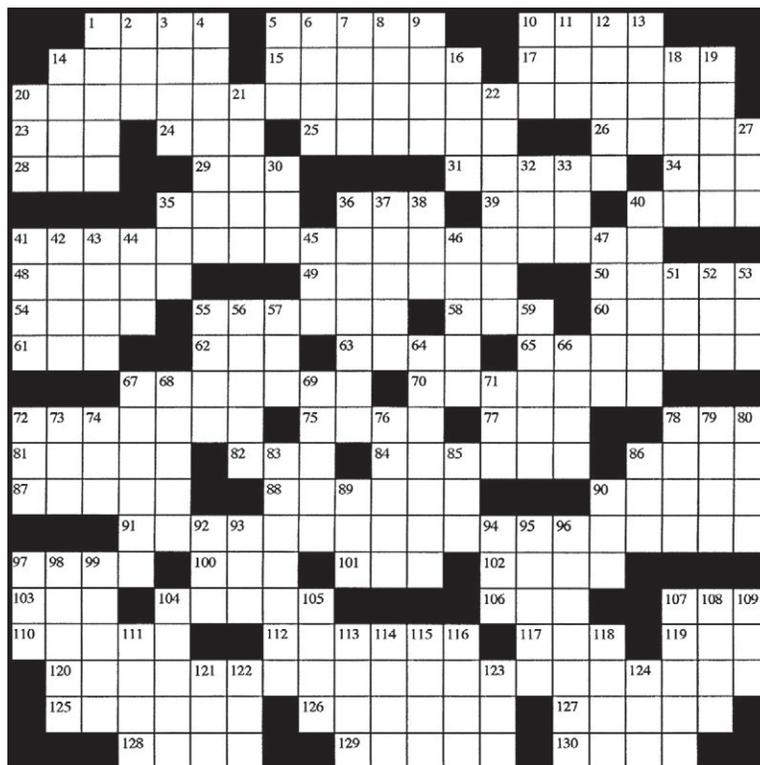
1. Trusted teacher
5. Milan's La ___
10. Gretzky's score
14. Wouldn't stop talking
15. Hand-plaited hat
17. Be adamant
20. Film ending
23. Word in eight Commandments
24. Paulo's title
25. French island
26. Opponent
28. Haig's initials
29. Boil contents
31. Pseudonym
34. Jungle denizen
35. Like a gymnast
36. Nonspecific illness
39. Tiny drink
40. Meth. or Luth.
41. Sitcom ending
48. In progress
49. College donors, often
50. ___ laws; pass legislation
54. Lays asphalt
55. Highway ___; police unit
58. Neighbor of Minnesota: abbr.
60. Infuriated
61. Poet's word
62. Resentment
63. Hair remover
65. Winter hangings
67. Second word in a creed
70. Teases
72. Ladies
75. Peepers
77. Storm or Metro
78. Air gun pellets
81. Folklore fellow
82. Monogram for actor Robinson
84. Maximally
86. Fanny
87. Mercury model
88. Amerindians
90. Clamor
91. Christmas poem ending
97. Not up yet
100. Bumpkin
101. Nourished
102. Once more
103. Part of fall: abbr.
104. Comedian ___ Fields
106. One in stripes, familiarly
107. See 120 Across
110. Canine, for one
112. Privileged groups
117. Skater Babilonia
119. Driving Ernie
120. With 107 Across, song ending
125. Wobble

126. Catch
127. Suspicious
128. Pair of antlers
129. ___ like; appears to be
130. Sunbathes

DOWN

1. Mr. Brooks
2. Family card game
3. Decomposes
4. Miserable
5. Very small pool
6. Word from one who lacks self-confidence
7. "...___ partridge in a pear tree..."
8. Lattice piece
9. Mine, in Marseille
10. Musician's job
11. Yoko ___
12. Lent-opening tradition
13. Roarer
14. Board's partner
16. "___ boy!"
18. Smudge
19. Musical speed
20. FBI crime lab evidence
21. "___ So Vain"; Carly Simon song
22. Waterproof garment
27. Nonetheless
30. Word div.
32. 10 dozen, less 10
33. Calendar abbr.
35. Beautician's offering
36. "That's absurd!"
37. Soft palate projection
38. Jewel
40. Becomes frantic
41. Abhor
42. O'er yonder
43. Had on
44. Sends to the mat, for short
45. Semicircular canal site
46. Night sound
47. Creepy
51. Launderer's purchase
52. Bee follower
53. Six-pointers, for short
55. Heap
56. Come up
57. Peg for Palmer
59. Ocean phenomena
64. As an alternative
66. Embolism, often
67. Love song
68. ___ Pompeo
69. Vice follower
71. Pompousness
72. Collins & Worth: abbr.
73. Historical period
74. Unruly crowd
76. Bird of prey
78. Slammer on the sea
79. Bad-mouth
80. Note to a printer
83. More bananas
85. Flavor enhancer, for short

86. Root food
89. 1986-90 TV sitcom
90. 90° from WSW
92. "Zip-a-dee-___-dah"
93. Tit for ___
94. Crew member
95. "Well, you're a fine ___ talk!"
96. Fail to make payments
97. Colony insect
98. Lift
99. Call forth
104. Fraternity letter
105. Gen. Robert ___
107. Loved ones
108. Supporter
109. Yves' monogram
111. Level
113. Places to stop
114. Bear
115. To be in France
116. Con artist's game
118. Conception
121. 1/3600 of an hr.
122. Floating zoo?
123. Albums of old, for short
124. Craving





I should have said something about learning from the best or working on high-stakes litigation. I should have said anything other than what came out of my mouth: “I don't really know, but the pay isn't bad! Ha ha.” The interviewer looked at me like I had three eyes, and the conversation never recovered.

It happens when to us all when we're under pressure. We lose control and “default” to whatever comes to mind. Before we know it, we're talking jibberish. And, like J. D. Vance we can believe why we did it. It happens when we don't prepare; when we don't write it down.

Change The Way You Present

While presentations may have several objectives, they all have one overriding goal: engaging the participants. Unless that happens, a presentation may be interesting and informative, but it's not a home run. Something is missing.

For a presentation to be a winner, it must be interactive—participatory. To invite the participants to interrupt you by raising their hand to ask a question and then to pick up the thread and continue takes confidence. But it also sends the message that the participants shape the presentation. This may sound dangerous but it's well worth the risk.

Change Your Persuasion Strategy

There are still salespeople who say, “If I can just get in front of prospects, that's all I need to close them.” If you want to give it a name, call it “the power

of persuasion.” They build their case in a way that leads prospects to the logical conclusion that their only reasonable response is saying yes.

Such a sales strategy is still popular; however, more and more of today's consumers and business buyers don't buy it. They push back, feeling they're being “set up,” “manipulated” or “pushed.”

Today, push is out; pull is in. To influence buying behavior today takes a sales environment in which customers can decide if they want to do business with you. It's one that gives them the opportunity to find out if they can trust you, if your messaging makes sense, and if you are reliable and responsive.

Change How You Relate To Customers

Even though companies continue preaching a customer loyalty message, they may be deceiving themselves. For example, Accenture's research indicates that 99% of retailers claim their loyalty programs perform at or above expectations, even though 71% of shoppers argue that such program do not result in loyalty.

The trend is toward “tentative” or quid pro quo loyalty. “As long as you give me what I want, I'll be loyal. If that changes, so will I.” This is the message. “These days, more and more consumers see their relationships with companies as an open marriage,” say authors Itamar Simonson and Emmanuel Rosen in their book, *Absolute Value*.

Clearly performance-based relationships are taking over. What counts today are consistently good customer experience, convenience, an easy payment process, new and innovative products, customer service (phone, in-person or online, according to a Blackhawk Network study. Even if they are an Amazon Prime customer paying \$99 a year, customers don't think twice about buying it for less elsewhere, particularly if there's free delivery. Clearly, performance-based relationships trump everything, including loyalty.

They say change is inevitable. If it's true, then there's no better place to start than with ourselves. 

BE THE HERO.

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	<p>SLIC PIN™ A pin and cotter all in one! US PAT: 6,872,039; 7,147,420. Foreign patents issued</p>
	<p>BOW-TIE LOCKING COTTER™ Quick-locking cotter pin won't fall off! US PAT: 6,135,693</p>
	<p>NYLON LANYARDS™ Low cost tether is an alternative to wire rope lanyards. Our original design!</p>
	<p>RUE-RING LOCKING COTTER™ Our original design! Locking cotter pin offers two locking features!</p>
	<p>AUTO-LOCK SAFETY PULL PIN Our newest! The tip stays locked! US PAT: 8,821,061</p>

OTHER SUPER POWERS INCLUDE:

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BRYCE AUSTIN WHAT DO MY EMPLOYEES NEED TO KNOW ABOUT CYBERSECURITY *from page 78*

There's no easy way to say this, so I'm just going to say it: Passwords stink. They are no fun to create, no fun to remember, and no fun to type in. That being said, passwords are still the most common authentication method today. It is imperative to implement a password policy requiring complex passwords that can't easily be guessed, and end-user training to go along with it. Microsoft's Active Directory "require complex passwords" setting is a start, but end-user training is also mandatory.

Many users use the same passwords for every online system they need a password for. This is a problem. If one site gets hacked, cybercriminals will try your credentials at all common websites, and possibly at your business's VPN. It is imperative that your cybersecurity awareness training program encourage your team members to use different passwords for different sites, and especially for any system that your company uses.

Most companies have some sort of safety guidelines that their employees must follow or be aware of and cybersecurity should be no different. There are a number

of companies that specialize in this type of training, and they may or may not be a good fit for your company culture. Picking the right type of training is critical; having a good cultural fit is more important than the actual content. Be sure to do proper due diligence to ensure that the training content offered by the company you are considering is a good fit for the culture of your company.

The important message here is that you already know you must train your employees on certain things in order to have them perform their job functions. Cybersecurity is one of those things. If you are uncertain as to how to structure a cybersecurity training program, find an advisor that can help you.

Questions to explore this topic further with your company's leaders:

[1] When was the last time you were trained on cybersecurity? What did you take away from it?

[2] Do your team members who have access to sensitive data get additional training above and beyond those who do not? 

BRYCE AUSTIN

COMPUTER INSIGHTS INC. PARTSBASE JOINS THE FASTENER SUPPLY CHAIN NETWORK™ *from page 84***What is the Fastener Supply Chain Network™?**

▫ The FSCN inventory sourcing connections give people instant access to millions of fasteners and aerospace parts. All directly from The Business Edge™ inquiry screens. All live up to the minute.

▫ The FSCN master distributor connections give people the ability to search for inventory, check availability and pricing, obtain certifications and drawings and place purchase orders.

▫ Orders flow seamlessly through The Business Edge™ without anyone ever re-keying them. It is almost effortless and it is 100% accurate - eliminating the need for double entry of information into multiple systems.

▫ Distributor's choose how purchase orders are handled. POs can be issued based on usage or customer orders, POs can be placed directly from a sales order, or automatically generated using The Business Edge™ Automatic Replenishment System.

▫ All purchase order confirmations are automatically posted to The Business Edge™

▫ The Business Edge™ allows for effortless drop shipping - automatically billing your customers based upon vendor invoice receipts.

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▫ The Fastener Supply Chain Network™ is only available with The Business Edge™

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To find out how you too can become part of this rapidly growing network, contact **Computer Insights, Inc.** at 108 3rd Street, Unit 4, Bloomingdale, IL 60108. Telephone at 1-800-539-1233, eMail sales@ci-inc.com or visit them online at www.ci-inc.com.

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distributornews

Sherex Fastening Solutions, a global leader in engineered fasteners, tooling, and automation, is pleased to announce Pacific Warehouse Sales (PWS) as the Western Region Master Distributor for its TEC Series wedge locking washer product line.

PWS will provide sales and service to distributors in Arizona, California, Colorado, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming. TEC Series products will be stocked in their distribution facility in Chino, California to provide short lead times to customers throughout the region.

"PWS has been a trusted partner for many years with our thin sheet metal attachment solutions," says President Adam Pratt, "and we are excited to expand our partnership with them and to continue to jointly provide the high quality sales and service our customers expect from Sherex and PWS."

"We are pleased to represent TEC Series in the Western region," says Vice President Kelly Lehman, "our customers expect best-in-class performance, availability, and value, and TEC series washers provide all of those things. This agreement with Sherex expands our product portfolio, and builds on years of successful partnering with Sherex."

TEC Series washers maintain clamp load in high vibration and load applications, protecting fastened joints from vibrational loosening using proven wedge locking 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.

TEC Series washers are available in standard and large outer diameter styles in carbon steel 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.

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distributornews

Sherex Fastening Solutions is a global manufacturer with a unique market approach in engineered fastening solutions. We combine fasteners, tooling, and automation to deliver the best solution at the lowest total installed cost. Sherex manufactures products for the Automotive, Aerospace and Defense, Agriculture and Construction Equipment, General Industrial, and Heavy Truck markets.

Pacific Warehouse Sales is a Master Distributor focused on serving distributors in the Western U.S. Region. They offer a vast inventory of products for the industrial and fastener markets with the service to match. PWS is a family owned and run for over 35 years and still stand strong with "Selling Distributors Only".

For additional information on any of the Sherex brand fasteners, tools, and automation please contact Sherex at 400 Riverwalk Pkwy, Suite 600 Tonawanda, NY 14150. Tel: 1-866-474-3739, email: info@sherex.com or visit our website at www.sherex.com.

CONTINENTAL AERO SETTING THE STANDARD FOR THE LAST 70 YEARS *from page 70*

In response to customer demand, Continental-Aero has also brought to market a line of Floorboard Screws. These Type F Flat Head Thread Cutting Screws are available in a phosphate & oil finish. This line demonstrates Continental-Aero's commitment to growing and changing to support the needs of their distribution customers.

For Continental-Aero, building on the success of the past is key. With 70 years of history, the highest levels of customer service and world-class quality products,



Continental-Aero's goal is to continually exceed their customers' expectations.

As Continental-Aero sells exclusively to distributors, factors such as competitive pricing, reliable quality, and timely delivery are critical to long-term success – something which Continental-Aero has been able to perfect over its long history.

Continental-Aero is the standard of excellence in the fastener distribution market since 1948 and plans nothing less than to continue to be the benchmark supplier for the next 70 years! 

CONTINENTAL-AERO

STEVEN SHERMAN DISTRIBUTORS BEWARE: REPLATING AND REPROCESSING RIVETS CAN WREAK HAVOC *from page 86***Assembled, Two-Piece Blind Rivets**

Another key product to be aware of is blind rivets. Blind rivets should not be replated at all because they are assembled, two-piece components. The plating process involves an acid bath followed by an electroplating bath. If this is applied to blind rivets in their assembled condition, the air released from the acids could cause the chemicals to become stationary in between the mandrel and the rivet body. Although the end product may look like a good rivet upon their return, it will rust over time. Other potential failures include bent mandrels or a rivet body that separates from its mandrel. Any of these scenarios will make the rivets unrepairable and unusable, potentially resulting in your having to throw away stock, which is basically throwing away money.



As you can see, it is best to consult with your manufacturer and have them provide the specific finish you need. They can ensure plating, wax or paint is applied to their specifications and before rivets are assembled – saving much wasted time, money and aggravation caused by unnecessary quality issues. They can also ensure the final product is tested in accordance with IFI requirements before the finished product is shipped.

If your manufacturer doesn't already have a product in stock that meets your needs, they can often quickly produce it based on their deep experience and inventory of sub-components.

The result is a win-win-win for the customer, distributor and manufacturer. 

STEVEN SHERMAN

NATIONAL FASTENER DISTRIBUTORS ASSOCIATION

3020 Old Ranch Parkway #300, Seal Beach CA 90740

TEL 562-799-5509 FAX 562-684-0695 EMAIL nfda@nfda-fasteners.org WEB www.nfda-fasteners.org

ESPS® RETURNS IN 2018 by Vickie Lester

Executive Sales Planning Sessions® return in 2018, in conjunction with the NFDA Annual Meeting, June 5-6, at the Embassy Suites Magnificent Mile in Chicago, Illinois.

The NFDA Annual Meeting and Executive Sales Planning Sessions® (ESPS) will bring you face-to-face with many of the most important partners in your business network.

Held in private suites, ESPS lets you set appointments with some of your current trading partners and future partners. This format will provide you a unique opportunity to connect, network, and conduct business, all in a single trip. Open to NFDA members and non-members alike, ESPS is one of the most efficient ways to build and maintain key business relationships. Only NFDA members are eligible to be ESPS hosts. NFDA is pleased to open registration to distributor members of all fastener industry associations, at the same rate as NFDA members.

NFDA's 2018 Annual Meeting will gather the industry's key players in one place, allowing you to make meaningful connections with new and existing colleagues, hear the latest news, and learn about what others are doing, all at one event.

Join fastener industry distributors and manufacturers, master distributors and service providers in Chicago at this critical forum for business planning and valuable industry information.

NFDA/YFP Leadership Academy Returns in 2018 Too!

Based on the rave reviews of the attendees at the inaugural 2017 Leadership Academy, we are pleased to announce the program will return on September 11, 2018 in Southern California.

Futurist and thought leader Shelly Alcorn will return as facilitator of this collaborative and highly interactive experience. Discussion topics 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?

NFDA, MWFA, and Pac-West Partner for Joint Meeting in 2019

Save the dates now for this historic meeting bringing together members of NFDA, Pac-West, and the Mid-West Fastener Association.

To be held March 14-16, 2019 at the Omni San Diego Hotel, this meeting will include dynamic educational programs and many opportunities to learn from others in the fastener industry.

Also on deck for 2019 is NFDA's Annual Meeting, scheduled for June 10-11 at the historic Hilton Netherland Plaza in downtown Cincinnati, Ohio.

For more information about NFDA and its activities, visit www.nfda-fastener.org or call 562-799-5519. 

BENGT BLENDULF SELECTING FASTENERS FOR HIGH WORK LOADS WITH HIGH SERVICE LEVELS *from page 100*

This way no heads are sticking out to catch hands, clothing or metal chips cut away from the work piece. Since lathes, hydraulic presses, milling machines and other types of machinery are usually kept indoors or otherwise protected from the influence of rain and dirt, no corrosion protection is needed as long as the fasteners stayed there. Fasteners in machinery usually have some oil on the surfaces which will protect from corrosion, at least indoors. Socket screws are traditionally made of alloy steels to maximize strength. Since machine tool parts also are typically made of higher strength steels, they can also allow higher levels of surface pressures from under the screw head. Socket screw standards in the United States, ASME B18.3 and ASTM A574, calls for alloy steels across the board, except stainless. Paragraph 1.7 in ASME reads "Because of the high hardness of these products, it is recommended that they not be electroplated". In the US metric versions (also alloy), ASME B18.3M and ASTM A574M, it reads (par.4.5) that coatings can be used for protective or decorative purposes.

Well, getting down to the more practical level..

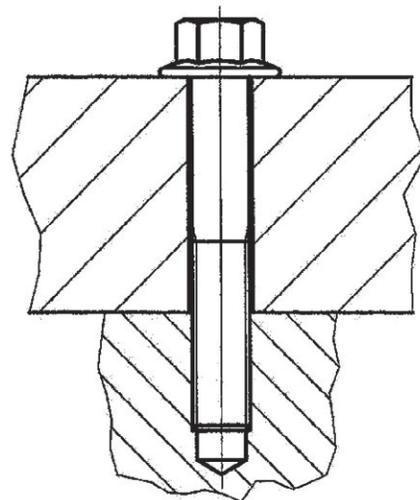
A fastener (any) with hardness of HRC 32 and above can be sensitive to hydrogen embrittlement from electro plating or pickling processes, or from the environment. Any fastener with hardness of HRC 35 and above can be sensitive to stress corrosion cracking (SCC) usually from environmental influences. This is why we should be very careful when subjecting socket screws to the "nasty" outdoors. We could use a protective coating, without hydrogen in the application process, to increase the survivability of socket screws. But, we may have problems with coating materials getting clogged up in the socket, making entry of the driving tool difficult. For the same reason we must keep the socket free of dirt from messy work environments. ISO 4762 for metric socket screws gives us the option of using 8.8 (Grade 5), 10.9 (Grade 8) or 12.9 (alloy). This way we can work our way around the embrittlement issue and use the standardized 8.8 which is OK in most cases.

Socket Screws are great product as long as we use them in a proper way.

External fasteners like Hex Cap Screws and Hex Nuts are more flexible, since they come in all standardized

property classes and grades. Since the combination of screws and nuts, clamping from the outsides of the joint, more joint materials are getting compressed making the joint stiffer, a desirable condition. A counter bored or countersunk socket screw (Fig 1b) must use up some joint material for "hiding" the head and can, therefore, not develop the same clamped volume. It goes without saying that if we can use through-bolting with a nut, a lot more material is getting clamped/compressed with increased joint stiffness as a result.

To increase the clamped volume in the joint we may also choose a Flanged screws/nut which came in standard property classes like 8.8 and 10.9. These fasteners will also lower the relative surface pressure and can be used even when clamping on lighter alloys like aluminium. The bearing area for a flanged fastener is usually 2-3 times larger than a regular hex screw/nut. Just remember to calculate torque values accordingly.



As a basic rule – don't use a stronger fastener than needed for the joint. Look at the capacity of the joint material to handle surface pressure and make sure that you don't exceed that limit. If a class 8.8 (Grade 5) can do the job, we don't need to be too concerned about hydrogen embrittlement or stress corrosion cracking. The hardness range for 8.8 is HRC 22-32 for sizes through M16 and HRC 25-34 for Grade 5 through 1". There are many groups working on the critical level for hydrogen problems and the hardness levels (current standards) indicated in my writing may be revised at some point. 

distributornews

Wrought Washer, the leader in the domestic washer industry, is pleased to announce Beth Reid's new position of New Product Development Manager.



Beth Reid has been in the Fastener Industry for 21 years. She started with Wrought Washer in early 1997 as Assistant Operations Manager at Franklun Tool & Die, which Wrought Washer owned.

Upon merging that operation to our Milwaukee Production facility Beth has been in both Sales and Engineering positions, handling many of our key accounts plus the Midwest territory.

Beth's education as an Industrial Engineer Technician, her years at Wrought in both Sales and Engineering along with her specializing in metallurgy make her a great candidate for the new Position of New Product Development Manager.

For more information contact Wrought Washer Mfg., Inc. at 2100 S. Bay Street, Milwaukee, WI 53207. Tel: 414-744-0771, Fax: 414 744 2105 or visit them online at www.wroughtwasher.com.

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In fact there is about a 4% volume expansion. As parts are quenched the outside cools first and the center last. As the center cools, however, it is expanding but pushing against the already cooled outer surface. This places the surface in tension and if the resulting residual stress is greater than the Ultimate Strength, cracking will occur. This often happens very shortly after quenching so that the manufacturer processing parts has little time to react to the problem. There are multiple strategies to prevent this from occurring, including proceeding immediately to tempering (what they call a “flash temper”) or slowing down the speed (aggressiveness) of the quench media.



FIGURE 4: QUENCH CRACKS IN ALLOY STEEL BOLTS

Although shear bursts and quench cracks usually render parts unusable, any of these four types of cracks can be an origination site for a progressive failure like fatigue. It is for this reason that fatigue sensitive applications often include requirements for NDT (non-destructive testing like Magnetic Particle or Dye penetrant Inspection) or the use of “seam and decarb free” wire to either eliminate the possibility of producing such parts or detecting them if they should occur.

Folds

In most cases, parts are not completed in one forming blow, but go through two or more progressive steps to obtain the finished shape. Occasionally there may be a small misalignment of the axis of one set of tools to the next. When this occurs the forming process may shave a small sliver of material from the form (usually the head or shoulder) created in the previous step. Because there

is so much force exerted during the forming process this small sliver of material will get pushed until it meets resistance, at which point the continuing force will blend it into the surrounding material. Although it may appear to be a continuous surface, wherever one of these errors occur, this sliver of material is just “folded” on top of the base material.

Although often presenting a visual anomaly or defect, not all folds are considered detrimental. They rarely impede part functionality or reduce part strength. The way they are viewed, however, will depend on the end use and the needs of the customer. Folds, like cracks, can be origination sites for fatigue, and must be controlled or eliminated for parts used in these types of applications.

Thread Laps

Another fatigue concern is thread laps. Thread laps are sort of the threading processes equivalent to folds. When threads are rolled they utilize a set of dies which must be meticulously set-up in the thread roller. If there is any mismatch between the dies it can result in the formation of a discontinuous fold between part revolutions. This results in what is known as a thread lap. When sectioned and viewed under magnification, these laps appear like cracks, but they actually will extend around much of the circumference of the part and may be located in multiple spots on the thread flank.

There are multiple causes for laps. The primary one, however, is attributed to poor machine set-up where the dies are not properly matched (aligned). Other things that cause laps include placing cross nicks on roll dies to help initiate the part turning in the die, the tilting of the blank as it enters the die, slipping in the die, quality of the blank, and the condition of the thread rolling machine.

Like cracks, thread laps are particularly troubling for parts that may be in fatigue applications. In particular, laps that are below the pitch line or pointing toward the root of the thread are particularly concerning. Manufacturers will usually investigate when they set-up the machine by etching a part in heated acid. If a part has laps, it will be evident after etching. Figure 5 clearly shows the laps present in this part.



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RICHARD HAGAN FASTENER COMPANY ACQUISITIONS COMPLETED DURING THE SECOND HALF OF 2017 from page 106



On July 21, 2017, **Hangzhou GreatStar Industrial Co. Ltd.**

("GreatStar") purchased **Arrow Fastener Co. LLC**. Founded in 1929 and based in Saddle Brook, NJ, Arrow Fastener is the leading manufacturer of staple guns and heavy duty staples in North America. The company's product range includes manual & electric staple & nail guns and glue & rivet tools. Arrow Fastener products are sold to consumers and commercial contractors, primarily through home centers, mass merchants and specialty retailers. Founded in 1993 and headquartered in Hangzhou, China, GreatStar is a developer, manufacturer and distributor of hand tools and power tools. The company manufactures a full range of specialty tools for drywall, masonry, tiling, plumbing and painting, along with automotive & general industrial applications. GreatStar products are sold to DIY consumers, professional contractors and industrial manufacturers around the globe. GreatStar shares are traded on the Shenzhen Stock Exchange (stock code: 002444). The seller of Arrow Fastener was Masco Corporation (NYSE: MAS), which acquired the company in 1999.

Purchase price: \$128 million



On July 31, 2017, **Snow Phipps Group LLC** ("Snow Phipps") purchased **Ideal Clamp Products Inc.**, doing business

as **Ideal-Tridon**. Founded in 1913 and headquartered in Smyrna, Tennessee, Ideal-Tridon is a designer and manufacturer of specialty clamps, couplings and strapping. The company's diverse product range is utilized by the automotive, heavy truck, petroleum, chemical, marine, plumbing, irrigation and general industrial sectors. Ideal-Tridon's fastening and sealing products are manufactured and distributed globally, with ten facilities in the United States (4), Mexico (2) Poland, India, Japan and China. Founded in 2005 and located in New York, NY, Snow Phipps is an operationally-focused private equity firm which targets platform investments with enterprise values between \$100 and \$500 million. Snow Phipps currently has \$2.4 billion of assets under management. The seller of Ideal-Tridon was **Industrial Growth Partners L.P.**, a San Francisco-based private equity firm with more than \$800 million of committed capital under management.

Purchase price: not available



On August 1, 2017, **Steel Dynamics Inc.** (NYSE:STLD)

purchased the commodity threaded rod division (the "CTR Division") of **All America Threaded Products Inc.** ("AATP"). The CTR Division of AATP operates from a 120,000 sq ft manufacturing plant in Indianapolis, IN and produces threaded rod for a diverse range of applications including plumbing, construction and HVAC. AATP acquired the Indianapolis operations in 2008 when it purchased Threaded Rod Company Inc. Two other nearby acquisitions completed in 2010 - Rods Indiana Inc. and J&D Industrial Products Inc. - were subsequently consolidated into the Indianapolis facility. Founded in 1993 and headquartered in Fort Wayne, IN, Steel Dynamics manufactures steel products including hot roll steel coils, structural & rail steel, engineered bar products and specialty shapes. Steel Dynamics is one of the largest metal recyclers in the US with approximately 75 recycling locations. The CTR Division will operate as a division of Vulcan Threaded Products Inc., a wholly-owned subsidiary of Steel Dynamics which was acquired in August 2016 for \$114 million.

Purchase price: not available



On August 1, 2017, **Altenloh, Brinck & Co. U.S. Inc.** ("ABC USA") purchased **Rodenhouse**

Inc. Founded in 1993 and located in Grand Rapids, MI, Rodenhouse is a designer and manufacturer of specialty screws, washers and installation tooling for building envelope (walls and roofs) fastening solutions. The company's proprietary products are used primarily to attach various building envelope components including rigid continuous insulation, building wrap and lath for adhered masonry. Founded in 1981 as TRUFAST Corporation and located in Bryan, OH, ABC USA is a developer and manufacturer of construction fasteners used primarily for roof and deck applications. Products are marketed under the well-known TRUFAST® and SPAX® brand names. ABC USA operates from a 196,000 sq ft manufacturing and administration facility, along with a nearby 11,000 sq ft heat treat facility. ABC USA is a wholly-owned subsidiary of Altenloh, Brinck & Co. GmbH ("ABC") which was acquired in December 2005. Founded in 1823 in Ennepeta, Germany, ABC is a manufacturer of externally-threaded fasteners and cold headed specialty parts for the European automotive and general industrial markets. A privately-owned company, ABC generates annual net sales of more than €250 million.

Purchase price: not available



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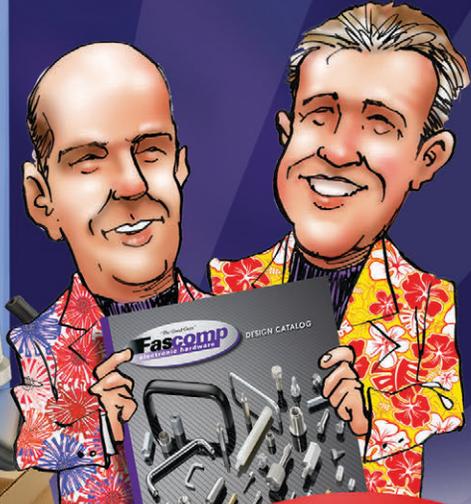
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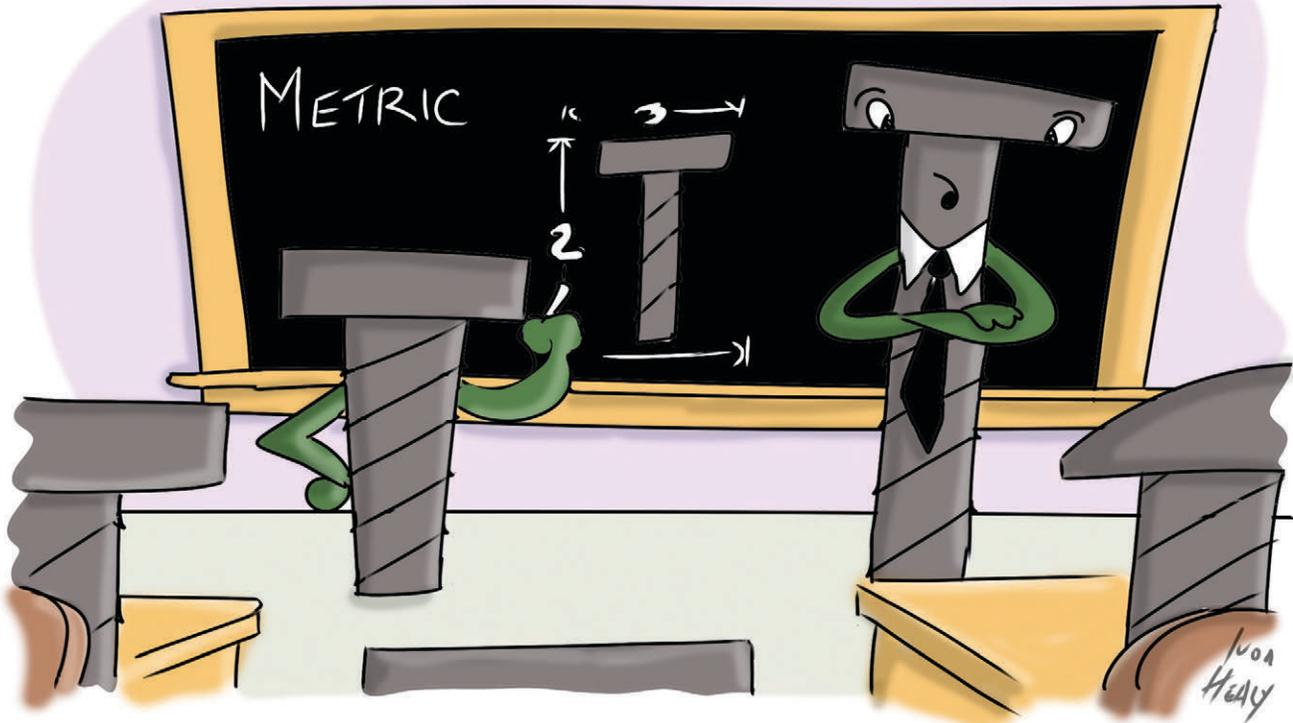
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ASTM B633 had been the predominant zinc electroplating specification used for steel items, including fasteners for many years. An electroplating specification more appropriate for fasteners, ASTM F1941/F1941M was developed in 2000 and has since been refined to become the only ASTM specification that is appropriate for electroplating fasteners. F1941/F1941M only requires baking of fasteners with a hardness greater than HRC 39 and case hardened fasteners.

ASTM B633 has requirements for baking that are not based on the current knowledge regarding hydrogen embrittlement susceptibility, and it should not be used for fasteners. It requires pre and post process baking of fasteners that have no susceptibility to IHE. Nevertheless, many fastener blue prints and fastener suppliers continue to specify ASTM B633 for zinc plating of fasteners.

What to do? Well, first, as a supplier, be very careful about making specification recommendations to your customers. You can inform them of the current standards and let them come to their own conclusions.

ASTM B633 has a statement that says:

"It may be used for fasteners but specific specifications have been developed for manufacturing fasteners in Committee F16 which may be more applicable (see Specification F1941/F1941M)."

ASTM F1941/F1941 says in its introduction:

"This standard shall be used in place of ASTM B633 for mechanical fasteners."

I believe that the above specification citations are more than adequate for any user who sees ASTM B633 as a fastener plating requirement to change to ASTM F1941/F1941M.

Encourage your customers to read and understand the fastener and plating specifications they are using and imposing on you, the supplier. If you do not understand

them, get some training and maybe provide training to your customers as well. Let them know they may be wasting money and taking unnecessary risks with B633. If you are a plating provider, undoubtedly you see orders for ASTM B633 on fasteners every day – maybe more than you see F1941/F1941M. And of course, you are baking all kinds of product that will not benefit from being baked. Although this may be a source of profit for you, consider how it may be more profitable to lower your customer's cost and improve their plating lead time by helping them to discover the difference between ASTM B633 and ASTM F1941/F1941M. Not to mention saving energy which is good for the environment. If you do not help them out your competition may do so.

The ASTM committee B08 on coatings is embroiled in a struggle to bring ASTM B633 in line with ASTM F1941/F1941M for IHE relief baking. It has been going on for over 5 years. Hopefully the end is in sight, but until then, and even after, only specify F1941/F1941M for plating fasteners.

The issues with the subsea bolting failures have certainly served a valuable purpose in educating the industry about the true cause and prevention of hydrogen embrittlement in fasteners. They have also brought to our attention the problems with using ASTM B633 for plating fasteners.

If you want to understand more about the subsea bolt failure issue, you can go to the BSEE website - www.bsee.gov/what-we-do/offshore-regulatory-programs/emerging-technologies/bolt-and-connector-failures

Or just google BSEE and bolt failures. You will find the reading fascinating, stimulating and confusing.

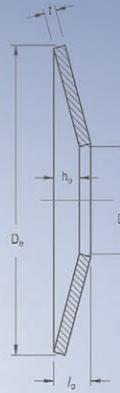
If you want to learn more about plating specifications, fastener specifications and hydrogen embrittlement go to the Fastener Training Institute Website and sign up for some fastener training: www.fastenertraining.org. I am sure you will find the training fascinating, stimulating and refreshing. 

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distributornews

BTM Manufacturing is proud to announce Smith Associates as a new representative. Smith Associates is a manufacturers' representative agency for the fastener industry representing domestic, quality manufacturers in the territories that include the Mid Atlantic region as well as New England. With over 46 years in the manufacturers' representative business, Smith Associates will begin representing BTM Manufacturing immediately.

"We at Smith Associates are excited to partner with BTM - a well-respected manufacturer with a long history of quality bent and threaded products. As a manufacturer's rep with over 46 years in the industry, the philosophy we have always stood by is the same as BTM: to meet and exceed our customers' expectations on a consistent basis.

Smith Associates supplies wire and metal products for military, structural, industrial, and commercial industries within the areas of Maine to Virginia. As a unique sales, marketing, & consulting organization, Smith Associates acknowledges individuality while aspiring to the agency's common vision. For more information on Smith Associates, please visit www.smithassociatesgroup.com.

BTM is a leading manufacturer of bent and threaded products. Our capabilities include U-bolts, J-bolts, studs, anchor bolts, eye bolts and bent/threaded product manufactured to custom specifications. Our size range from 3/16" through 4" diameter in a variety of ferrous and non-ferrous materials.

For more information contact BTM by Tel: 1-800-369-2658, Fax: 816-331-0473, Email: sales@btm-mfg.com or at www.btm-manufacturing.com.

distributornews

ISSCO, INC., is pleased to announce the promotion of Jeremy Baldwin to Director of Purchasing. Jeremy started in ISSCO's warehouse in 1997. He gained experience in everything from filling orders to shipping and receiving. Nine years ago, Jeremy moved into purchasing and has continued to grow in this position with the guidance of ISSCO's President Jake Davis, to now being named the Director of Purchasing.

Jeremy's role will transition from buying the day-to-day standard items to ensure all of the purchasing needs of the company are fulfilled.

"I have had the pleasure of working alongside Jeremy since 2009. Throughout his 20-plus years at ISSCO, he has gained meaningful experience within each role, and has shown a great desire to learn and develop into a complete purchasing agent. He treats our vendors with the ultimate respect while ensuring they meet our expectations when it comes to the supplier-distributor relationship. Jeremy has the passion and competitiveness to make ISSCO a better company, and I look forward to working with him for years to come," said Jake Davis, ISSCO, INC.'s President.

For more information, contact ISSCO, Inc. at 1310 SE Hamblen Rd, Lee's Summit, MO 64081. Telephone 816-525-8889 or visit them online at www.isscoinc.com.

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PAC-WEST CELEBRATES 50th ANNIVERSARY IN 2018

by Vickie Lester

First there was the Los Angeles Fastener Association, founded in 1968. Then came the Western Association of Fastener Distributors in 1982. Together they became the Pacific-West Fastener Association in 2009.

Pac-West will celebrate its legacy of 50 years serving the fastener community at its 2018 Spring Conference, April 18-21, at The Scottsdale Resort at McCormick Ranch, Scottsdale, Arizona.

Conference Education Features

“Compliance 101” by Carmen Vertullo which will help you take some of the confusion out of compliance requirements, such as:

- ▣ California Proposition 65
- ▣ Conflict Minerals
- ▣ DFARS
- ▣ RoHS II
- ▣ REACH
- ▣ WEEE
- ▣ ELV
- ▣ IMDS
- ▣ Country of origin labeling

“Performing Under Pressure” by Bobi Seredich of EQ Inspirations, where attendees will learn:

- ▣ How to manage pressure so it becomes a competitive advantage for you in growing your career and in helping your organization drive performance
- ▣ Research from a study of 12,000 people and what the top 10% did to excel under pressure
- ▣ Three pressure insights that will help you avoid the sabotaging effective of pressure
- ▣ Stories of leaders and organizations who have managed pressure effectively to succeed

“Cybersecurity and Your Business,” which will discuss a real case study of a fastener distributor’s experience with ransomware so that you can learn how to avoid exposure.

“What’s in Store for the U.S. Economy?” by Christopher Thornberg, founding partner of Beacon Economics and director of the UC Riverside School of Business Center for Economic. In this session, you’ll get a thorough analysis of key economic indicators and gain insight into the direction the economy will take over the near and long-term future.

Business Owners & Executive Roundtables

Check our website at www.pac-west.org for details.

Pac-West 2018 Calendar of Events

- Apr. 18-21** Spring Conference
The Scottsdale Resort, Scottsdale AZ
- May 10** After Hours
Location TBD, Southern California
- May 18** Mel Kirsner Memorial Golf Outing
Westridge Golf Club, La Habra CA
- Jul. 12** After Hours
Location TBD, Denver CO
- Aug. 8-11** Fall Conference
Grouse Mountain Lodge, Whitefish MT
- Sep. 11** Dinner Meeting
Holiday Inn, La Mirada CA
- Sep. 13** After Hours
Portland Brewing Taproom, Portland OR
- Dec. 6** Holiday Party
Holiday Inn, La Mirada CA

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

Time Factors

The party has a fixed time for starting and stopping. This makes every minute valuable and irreplaceable. With Lanie and her band, a dance floor and cousin Stash's accordion act time becomes more limited. Telling the entertainers "Forget it." depends on family dynamics along with the rationale for the party. Is time saved more precious or is it more important to have a good time?

Building the initial structure off site is a means of buying time, not just saving it internally. For most places as time advances so does urban encroachment. Twenty acres of vacant ranch or farm land at a highway interchange is often a magnet for development. Gas stations (electric charging), hotels, casinos, restaurants, fast food and ultimately other business development makes this an almost assured investment. So as time passes and the land becomes more valuable sooner or later someone might want to buy 5 to 10 of those acres at a tidy profit. One can hope, plan and market accordingly. When it happens several other factors kick in.

The sales price now dictates a new value for the remaining land. If the lot was originally purchased for \$10,000/acre and sells for \$50,000 the initial investment of \$200,000 paid makes loan at an accelerated rate this land can become the down payment on a mortgage sufficient to finance the construction of a new Corporate Headquarters of your dreams. Essentially you are now cashing out the initial investment for long term debt balanced against depreciation.

This works even better if the impetus for the building expansion is because someone offered tons of money for the current urban location. In this case leaving the office, showroom and a branch counter behind while selling off all the old sheds and land can be used in what is termed a "1031 Like Kind (Stryker) Exchange." Under this IRS dictated plan land profits are tax deferred and will ultimately be based on a future valuation of the new asset. As the accountants explain it you have moved

taxes down the road and as the estate planners explain it with this asset held in a family trust your grandchildren can deal with the ultimate tax liability...with a "time of passing" appreciated basis value.

All this implies that there is potentially millions of dollars to be saved in taxes, operational efficiencies, a far cheaper initial structure, superior customer service and reduced potential disaster risk. All this with a little foresight, economic expansion and luck. What's not to like?

Now for a Quiz

Does all this meet you Mission Statement of serving your customers, enhancing the environment for your staff, planning for retirement, making lots of money? Sure thing!

Is it smart business planning? Very smart!

Can something go wrong? There is always risk, but it is constrained by the flexibility of being able to carve up the 20 acres into smaller more marketable lots, selling the initial building, etc!

What if you receive an offer for the entire business that's too good to pass up? Then the really smart thing is to build the full building by reinvesting some of the sale profits and leasing the facility back to the business...in a trust!

Is it legal? Definitely and over the years we have had several clients follow this program very profitably.

And how will it affect the rest of the business planning? For that we need another topic heading.

Ultimate Impact Statement

By changing paradigms and charting a new course there are many opportunities that can be explored and new programs implemented. For example one would find out quickly that tighter inventory control is vital to insure that materials in the back up warehouse arrive on a timely basis. Pushing this into becoming predictive where the last piece is shipped out just as the replacement inventory arrives is a new goal.



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1/4	5/32	8MM	5MM
5/16	3/16	10MM	6MM
3/8	7/32	12MM	7MM
1/2	5/16	13MM	8MM
5/8	3/8	14MM	8MM
3/4	1/2	16MM	10MM
1	5/8	18MM	11MM
		20MM	12MM
		21MM	13MM
		25MM	16MM
		30MM	18MM
		32MM	20MM
		35MM	21MM
		40MM	25MM

Summary

A truly unique feature of the slotted large diameter pins is the diameter and size range. The standard ISO pins are available in a multitude of diameters and lengths. However, if you need something that is non-standard, special diameters, lengths, and slot designs are available as engineered applications.

Coiled pins, tapered pins, groove pins, customer bolts cannot economically offer the range of diameter and lengths found with a slotted tension pin. 



VOGELSANG FASTENER SOLUTIONS

ROBERT FOOTLIK THE PARTY PLAN MEETS THE REAL WORLD from page 158

Resupplying multiple branches through a DC opens the possibilities of balancing inventory between branches. Excess materials or specialty items from one city can then be shipped internally to another location on a planned overnight basis. The implication here is that this can/should be done during off hours which effectively leads to other programs.

One of those programs would be that if the transfers are after 5 PM then order picking for next day delivery can start at any time as long as the orders are on the transfer truck as scheduled. Discuss that with others and you will find it leads to some very lucrative operational and inventory efficiencies.

With even the initial back up warehouse in place the transfer trucks can stop anywhere on their route with minimal lost time. For example a community that is underserved by others becomes prime territory for your sales staff. Orders placed on a timely basis can be

dropped off in the middle of the night at a farm, ranch, store front or firehouse for overnight pickup. Given the technology available today even a small garage can be equipped with a computer, modem and program that controls and communicates with headquarters. Electronic locks on doors, cages, bins, etc. can be programmed to allow controlled access and with cameras and sensors you can track the where, when and who took the merchandise.

This is just the start of where the creative process can lead and how it can shape your Mission Statement. As the previous article pointed out...

“What, you don’t have a Mission Statement?” Go back and rethink the whole Party Problem (expansion plans) and how it accomplishes a specific purpose and plan. Every endeavor in your career will advance something for yourself or your employer. Taking this into consideration up front can help guarantee success.” 

distributornews

J.W. Winco, Inc., A Ganter Company, a leading supplier of standard industrial machine components, announced the offering of GN 2342 Stainless Steel Assembly Pins.



These RoHS compliant assembly pins are characterized by their use in diverse applications. Depending on the requirement, there are three washer types to choose from, which place the bolt in an axial position in its insertion direction. The washer with eyelet (Type E), the assembly pin, and a corresponding spring cotter pin can be secured to prevent loss using a retaining cable or ball chain. The washer with mounting shackle (Types L) simultaneously acts as loss protection and anti-rotation protection.

The assembly pin and washer are stainless steel, as is the countersunk screw, which is not removable and loctited in place.

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, Wisconsin, with sales 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@jwwinco.com. JW Winco's new website, with improved 3D CAD and online buying, is viewable at www.jwwinco.com.

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WIFI ANNOUNCES TWO SPEAKERS FOR FASTENER FAIR USA *from page 135*

WIFI would like to introduce Christine Hunt, RD, LD. Christine is a registered and licensed dietitian with 18 years of experience in nutrition and wellness. Christine has experience in several nutrition fields including pediatrics, disordered eating, weight control, public health, private consulting, and corporate wellness. Currently, Christine is the Wellness Coordinator for Brighton Best International and Ta Chen International employees. Additionally, Christine consults as a virtual online wellness coach. As a wife and mom of four children, she strives for optimal health, happiness, balance and wellness for herself and her family. Christine is thrilled that her career has helped her teach, consult and help so many others to achieve their own health and wellness goals.

**Presentation: "Stress in the Workplace"**

Christine will be touching on most of these topics

- The roll stress can play in the state of your physical and mental health
- Clear and practical steps you can take to reduce stress
- The Do's and Dont's of workplace wellness

WIFI's mission is to provide opportunities for women in the fastener industry at all levels of experience, to unite in order to educate, mentor and encourage one another, for the express purpose of advancing women in the fastener industry.

For more information on WIFI's Fastener Fair USA activities, or to find out more about Women in the Fastener Industry, visit them at www.fastenerwomen.com. 

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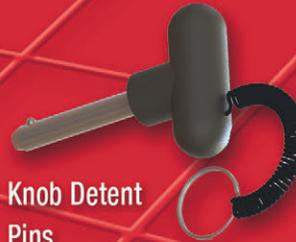
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FIGURE 5: ETCHED PART SHOWING THREAD LAPS

Adiabatic Shear Banding

One of the more vexing manufacturing defects is a condition known as Adiabatic Shear Banding. Figure 6 illustrates a part that has failed as a result of shear banding. Note that the head has separated into two parts transverse to the part axis. A shear band is created during high strain and high strain rate events such as the cold forming process. In essence, the extreme stresses imposed during the metal working process form a discontinuous band of material characterized by two metal grain boundaries separating from one another. This weakens the feature and results in breakage under very minimal loading.

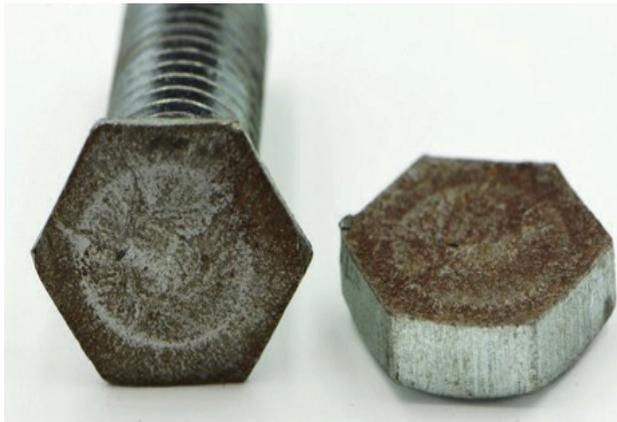


FIGURE 6: HEAD SEPARATION FROM ADIABATIC SHEAR BANDING

Grain Flow

Although appearing somewhat similar to shear banding, poor Grain Flow represents a different result when parts do not form properly. During the upsetting process used to create a head or flange feature, the grains which run in an axial direction (from the hot rolling process) are bent around to take the shape of the new head or collar feature. If the part tooling and set-up are correct, this grain flow pattern will be continuous and smoothly distributed around the new feature. However, if the material is not flowing properly, this grain flow pattern will show “kinks” (like one can get in a garden hose) where the grain flow does not smoothly transition or they will terminate at the surface instead of continuously wrapping around the configuration of the feature. Figure 7 illustrates an example of good grain flow. One sees that the material wraps smoothly and continuously around the new head and flange feature.

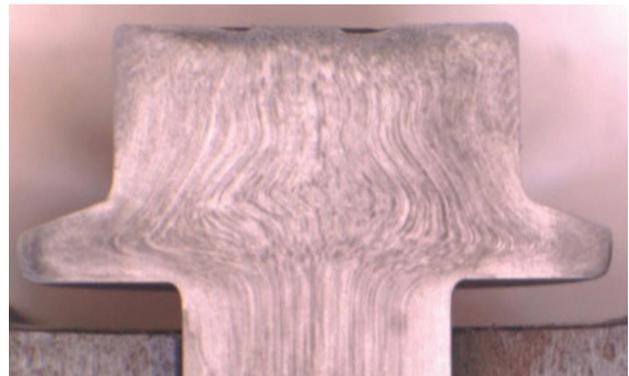


FIGURE 7: GOOD GRAIN FLOW

Decarburization

When parts and raw material are exposed to heat treating processes it is critical that they be protected by the process atmosphere so as not to change their chemical composition. In particular, it is critical to avoid decarburization. When metals reach critical elevated temperature, their constituent atoms become very “excited”. At elevated temperatures, therefore, these metals may have an affinity to react with atoms in the surrounding environment that they would not react with at normal temperatures. Often the resulting chemical reactions can have deleterious effects.

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RICHARD HAGAN FASTENER COMPANY ACQUISITIONS COMPLETED DURING THE SECOND HALF OF 2017 from page 152



On August 7, 2017, **Kyocera Corporation** purchased **SENCO Brands Inc.** ("Senco"). Founded in 1948 and headquartered in Cincinnati, Ohio, Senco is a designer, manufacturer and distributor of collated screws, nails and staples, along with branded cordless nailers, staplers and screwdrivers. The company's fastener products and systems are used for a broad range of construction, woodworking and general industrial applications. Senco employs more than 600 people and operates from more than 15 global locations, selling products in more than 40 countries. Following the transaction closing, Senco will operate as part of Kyocera's Global Cutting Tool Division. Founded in 1959 and headquartered in Kyoto, Japan, Kyocera (NYSE: KYO) is a multinational developer and manufacturer of ceramics, electronics and industrial cutting tools. Kyocera generates annual net sales of approximately \$12.7 billion and employs more than 70,000 people worldwide. The seller of Senco was **Wynnchurch Capital LLC**, a Chicago-based private equity with \$2.2 billion of committed capital under management.

Purchase price: not available



On August 16, 2017, **The Watermill Group** purchased **Cooper & Turner Limited**. Founded in the 1960's and headquartered in Sheffield, England, Cooper & Turner is a manufacturer and distributor of high-strength, large diameter fasteners for safety-critical applications. End-users of Cooper & Turner products include the heavy construction, wind energy, oil & gas, tunneling & mining and general industrial markets. In addition to a more than 500,000 square foot manufacturing plant in Sheffield, the company maintains five sales / warehouse locations in the United Kingdom (2), China (2) and the United States. Following the transaction closing, current Cooper & Turner senior management will remain in place and retain a significant equity shareholding. Founded in 1993 and located outside Boston, Massachusetts, Watermill Group is a private equity firm which targets platform acquisitions with annual net sales between \$40 and \$500 million.

Purchase price: not available



On August 28, 2017, **Bolts & Nuts Corporation** purchased **Challenger Component Services Inc.** ("Challenger"). Founded in 2002 and headquartered in Nashville, Tennessee, Challenger is a distributor of fasteners and Class C components, supplying a predominantly OEM customer base. The company provides customers with a range of value-added services including VMI programs, global sourcing, kitting programs and custom bagging. Challenger maintains two branches in Oklahoma City, Oklahoma and Birmingham, Alabama. Founded in 1979 and headquartered in Chattanooga, Tennessee, Bolts & Nuts is a full service distributor of fasteners and Class C components, providing advanced supply chain management services to a diverse range of OEM and MRO customers. The company operates six branches in Georgia, North Carolina, Kentucky, Illinois, Nebraska and California. Bolts & Nuts is owned by **Nebraska Heavy Industries LLC**, a Lincoln, Nebraska-based privately-owned investment company.

Purchase price: not available



On August 28, 2017, **Max Mothes GmbH** purchased **VSP Fasteners SpA**. Founded in 1978 and located near Milan, Italy, VSP Fasteners is a manufacturer of hot forged and cold headed screws and bolts, which are used primarily in high-end or safety-critical applications requiring the highest level of certified quality. The major end-user industries served by VSP Fasteners include heavy construction, heavy equipment, water & waste treatment, chemical processing and shipbuilding. The company generates annual net sales of around EUR13million and approximately 80% of production is exported to other European countries. Founded in 1918 and headquartered in Neuss, Germany, Max Mothes is a full-service distributor of fasteners and Class C components, which specializes in providing its primarily OEM customer base with advanced supply chain management services. The company also manufactures standard and made-to-print machined components. A privately-owned company, Max Mothes employs more than 300 people and operates branches in Austria, Belgium, Italy, Turkey and China. The seller of VSP Fasteners was **Arcadia SGR SpA**, a Milan-based private equity firm which invests in small to medium-sized companies in Italy.

Purchase price: not available

distributornews

Threaded Fasteners Inc. has continued its multi-state expansion with the acquisition of Tampa, Fla.- based Bolt & Nut Inc.

According to information released by Threaded Fasteners, the company opened a Tampa office in 2013. Its employees will now join the 21-member Bolt & Nut team at its 46th street location, which “offers more than 50,000 square feet of manufacturing space and sales offices near the campus of the University of South Florida.”

Overall, Threaded Fasteners describes itself as an employee-owned business with a staff of more than 160 and \$4.5 million in inventory across six distribution warehouses in Alabama, Mississippi, Florida, Oklahoma and Tennessee.

Bolt & Nut founder Bob Cornett said he'd received other offers but Christian values were a factor in giving Threaded Fasteners the nod. “From the first time I met the Threaded Fasteners leadership team, we had a common bond and that was the Lord,” Cornett said. “It was truth right off the bat. If it hadn't been for the Lord, I don't think this would have ever happened.”

“Bob Cornett has such an incredible story of success you just can't help but be intrigued,” said Threaded Fasteners President Billy Duren. “I've discovered Mr. Bob's word is as good as a 40-page legal contract.

According to information released by Threaded Fasteners, the 78-year-old Cornett will continue to own and operated a separate business, Hurri-bolt Inc., which makes hardware designed to fortify buildings against severe winds.

In October 2017, Threaded Fasteners bought Stalene Fasteners, based in Rossville, Ga. Also in 2017, Threaded Fasteners moved from its longtime home in downtown Mobile to a new national distribution center in the city's Crichton district.

Founded in 1979 by brothers-in-law Frank Martin and Steve Sholtis, Threaded Fasteners Inc. (TFI) has grown from modest beginnings (one chop saw and one rigid pipe threader in a borrowed warehouse) to be one of the largest fastener and steel bolt distributors in the Southeast.

For more information contact Threaded Fasteners Inc at 3200-A Crichton Street, Mobile, AL 36607. Tel: 251-432-0161, Email infonationaldistribution@tffmg.com or visit www.threadedfasteners.com.

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MFDA HONORS HALL OF FAME INDUCTEES AT HOLIDAY PARTY *by Nancy Rich*

The MFDA inducted its Hall of Fame class of 2017 on Thursday December 7th. The Hall of Fame, which honors those who have made significant contributions to the MFDA and the New York area fastener industry, inducted its inaugural class in 2016.

Hall of Fame Committee Co-Chairs Robin Lieberman (President – MF Supply) and Robert Rundle (R.W. Rundle Associates Inc.), lauded the class of 2017 for having a combined 127 years in the fastener industry. In all three cases, the honorees started on the very bottom rung of their companies, and through hard work and perseverance, have achieved success both in the industry, and beyond.

The Class of 2017

Bill Fivehouse (Star Stainless Screw Co)

Bill started at Star as a 16 year old part-time worker in the summer of 1976. He was hired to a fulltime position, and over the next 41 years worked his way from the warehouse, to the sales desk, and to management, where he now server as Star's Operations Manager. Bill said of his journey "One of my greatest joys is helping new employees find their way in our industry, and helping them grow into the next group of industry leaders".

Chuck Halpin (Brighton-Best International)

A three time MFDA president, Chuck also started as a part-time worker in the warehouse so he could help pay for college. It was after a promotion to Carlstadt NJ

Branch manager that Chuck was introduced to the MFDA where he was on the board for nearly 20 years. Chuck is currently on the board of NFDA and the MAFDA (which he helped co-found after a promotion to the Philadelphia area), but told the MFDA membership "my roots will always be with the Metropolitan Association".

Doug Thonus (Fastar Inc)

After leaving active service in the Army, Doug started a long career in the fastener industry in 1967 at the Atlantic Spring Pin Company. Stops along the way included Rexnord, United Products, Anderton-United, and Precise Products. In 1998 Doug left Precise and founded Fastar Inc. in Tallman NY. Doug was chairperson of the MFDA's Toys for Tots drive for its first fifteen year and served three terms on the board of the MFDA. He also serves as the association's unofficial historian.

Along with a place on the MFDA's Hall of Fame page on its website, the three will have the MFDA's 2018 Hall of Fame Scholarship named in their honor.

Based in the New York City Metropolitan Area, the MFDA is dedicated to representing all segments of the fastener industry. The MFDA holds general and special meetings with industry specific educational topics, sponsors an industrial trade show, weekend activities, industry wide social events, regularly scheduled board and committee meetings, and awards college scholarships to the children and employees of member companies.

For more information, please visit www.mfd.us. 

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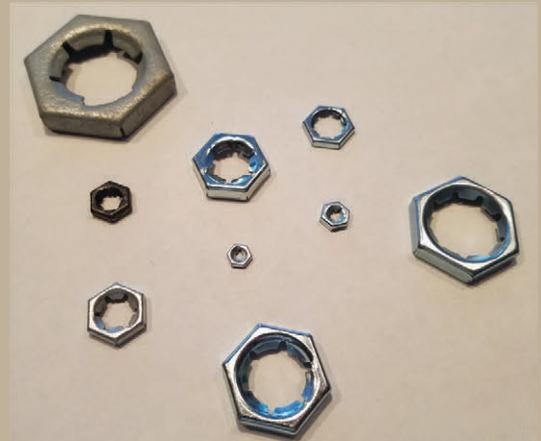
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When steel is being heat treated, often one of the first steps is to raise the temperature of the parts to force the uniform and complete transition of the steel's internal structure to Austenite. This is known as austenitizing. During this part of the process it is important that the atmosphere surrounding the parts is neutral (meaning that it does not trigger unwanted chemical reactions with the steel) and protective. Unfortunately, every so often mistakes are made or the furnace has leaks which result in the atmosphere surrounding the parts to be imbalanced with respect to carbon and, thus, "pull" (or steal) carbon atoms from the steel. This process will always start at the surface and the degree of carbon loss will be a function of the time parts are exposed to and the extent of the imbalance. The result, however, is what is known as decarburization.

Decarburization is especially problematic in parts that are in fatigue loading applications. Because decarburization makes the surface of the part less strong, it opens up the door for crack initiation at lower than expected loading. Decarburization can also be a problem for tapping screws where the strength integrity of the threads is critical and even small strength discrepancies could lead to application failure.

Manufacturing Defects That Prevent Assembly

Broken Punches

A common forming problem is a broken punch. The punch can completely break, as illustrated in Figure 8, and leave the recess completely unfilled and the head dimensionally incorrect or partially chipped out as illustrated in Figure 9, leaving only a small protrusion in an otherwise properly formed recess. Either scenario, however, results in assembly problems for the end user.

This problem can be the result of a number of causes. Most often partial punch breakage can be attributed to punches that have reached the end of their

useful life. Completely broken punches are more often than not the result of the machine indexing before the punch has had the opportunity to completely withdraw from the recess. This could be the result of an improperly timed set-up, a punch that is failing to release from the recess or an aged machine that has a significant amount of play its moving components.



FIGURE 8: FULLY BROKEN PUNCH



FIGURE 9: PARTIALLY BROKEN PUNCH

distributornews

The NEFCO Corporation, a leading distributor of construction and industrial supplies, announces its acquisition of Contractors & Industrial Supply (CIS), Inc., a dynamic specialty construction distributor servicing the Southern Virginia and North Carolina markets.

"The growth of the NEFCO brand into Virginia and North Carolina gives us a greater foothold within the Mid-Atlantic States," continued Mr. Gelles. "With the addition of the three CIS locations in Greensboro, NC; Roanoke, VA; and Harrisonburg, VA; NEFCO will now have 10 strategically located distribution centers allowing us to leverage our unmatched breadth of product solutions and value-added services to general and specialty contractors up and down the East Coast."

NEFCO has distribution centers located in Boston, Hartford, New York City, Albany, Philadelphia, Washington D.C., Fort Lauderdale, Greensboro, Roanoke, and Harrisonburg.

For more than 35 years, the NEFCO Corporation has delivered diversified product offerings and value-added services to general and specialty contractors focused on the electrical, mechanical, plumbing, HVAC, sprinkler and many more trades throughout the East Coast.

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distributornews

Triangle Fastener Corp. opened a TFC Tech Center in Cleveland. The new 1,100 sq. ft. facility provides equipment for product design (CAD), development (3D printing and machine shop), evaluation (tensile, shear, hardness, pullout, pullover, drill/drive tests, dimensional conformance), and certification.

"We now have many different types of testing equipment to assure that our fasteners perform at optimal levels," stated product development VP Joe Stager. "This also gives us the ability to provide our customers with additional engineering and product development support."

For more information contact Triangle Fastener Corp. by Tel:412-321-5000 or visit them online at www.trianglefastener.com.

news courtesy of globalfastenernews.com

RICHARD HAGAN FASTENER COMPANY ACQUISITIONS COMPLETED DURING THE SECOND HALF OF 2017 from page 166



On August 31, 2017, **Koninklijke Nedschroef Holding B.V.**

(“Nedschroef”) purchased a 90% equity stake in **CP Tech GmbH**. Founded in 2006 and located in Büren, Germany, CP Tech is a developer and manufacturer of lightweight and high-strength metal components used primarily for automotive and motorsport applications. The company’s products are used in a range of engine, transmission, suspension and frame applications and its customer base includes Porsche, BMW, Bugatti, Lamborghini, Audi and Volkswagen. CP Tech operates from a 120,000 square foot manufacturing and engineering facility and employs approximately 175 people. Founded in 1894 and headquartered in Helmond, The Netherlands, Nedschroef manufactures a broad range of cold headed fasteners and specialty components which are sold primarily to the European automotive industry. The company is also engaged in the design and manufacture of cold heading machinery used to produce fasteners. Nedschroef operates from 25 locations in 14 countries and employs more than 2,000 people worldwide. The company generated net sales of €629 million (US\$742 million) in calendar 2016. Nedschroef is a wholly-owned subsidiary of Shanghai Prime Machinery Company Ltd. (Hong Kong Stock Exchange: 2345).

Purchase price: €5.3 million (US\$6.3 million)



On September 29, 2017, **American Securities LLC** purchased **MW Industries Inc.** Founded in 1973 and

headquartered in Rosemont, Illinois, MW Industries manufactures a diverse range of engineered mechanical components including springs, precision stampings, wire forms, metal bellows, threaded inserts, specialty threaded fasteners and precision machined parts. The company is comprised of 22 manufacturing business units spread across the United States. MW Industries produces more than 100,000 different product types which are sold to OEMs and aftermarket customers via a combination of direct sales, catalogs and distributors. End-users include the aerospace, electronics, medical, appliance, energy, automotive and many other sectors. American Securities is a New York City-based private equity firm with approximately \$15 billion of assets under management. The seller of MW Industries was **Genstar Capital LLC**, a San Francisco-based private equity firm with more than \$5 billion of committed capital under management.

Purchase price: not available



On October 3, 2017, **Lawson Products Inc.** (Nasdaq: LAWS)

purchased The **Bolt Supply House Ltd.** (“Bolt Supply”). Founded in 1948 and headquartered in Calgary, Canada, Bolt Supply is a distributor of fasteners, power tools, safety products and industrial MRO supplies, serving companies and professional tradesmen across western Canada. The company operates thirteen branches in Alberta (9), Saskatchewan (3) and Manitoba and packages & ships product from a 43,000 square foot distribution center in Calgary. Bolt Supply generates annual net sales of approximately \$34.5 million and employs 27 sales territory managers. Founded in 1952 and headquartered in Chicago, Illinois, Lawson Products is a national distributor of fasteners, fittings, cutting tools, hand tools and general industrial supplies. The company carries a comprehensive range of products and provides inventory management services to MRO customers throughout the United States, Canada, Mexico and the Caribbean. On December 31, 2016, Lawson Products employed approximately 1,590 people, including 1,130 sales & marketing representatives. In calendar 2016, the company generated net sales of \$276.6 million.

Purchase price: \$32.1 million

Heads&Threads On October 5, 2017, **Park-Ohio Holdings Corp.** (“Park-Ohio”) purchased **Heads & All Threads Limited.** (“H&AT”). Founded in 1986 and headquartered in Birmingham, England, H&AT is a full-service distributor of fasteners and Class C components. Specializing in providing its OEM customers with advanced supply chain management solutions. The industries served by H&AT include automotive, power generation & transmission, high technology and construction. H&AT generates annual net sales of approximately \$35 million and has five operating locations in England (2), Poland, Czech Republic and India. Founded in 1961 and headquartered in Cleveland, Ohio, Park-Ohio (Nasdaq: PKOH) manufactures a diverse range of engineered products and assembly components. The company’s **Supply Technologies LLC** business unit is a distributor of fasteners and Class C parts, specializing in providing customers with advanced supply chain management solutions. Supply Technologies operates 65 logistics service centers around the globe and generated net sales of \$502 million in calendar 2016. Following the transaction closing, H&AT will operate as a wholly-owned subsidiary of Supply Technologies.

Purchase price: not available

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MAFDA HOLIDAY PARTY by Chuck Halpin

The Mid-Atlantic Fastener Distributor Association topped off the year with a holiday party to celebrate the successful year and kick-off 2018. It was an event to remember and if you missed it you truly missed one of the best functions in the fastener industry.

2017 saw the MAFDA expand in all directions: distributor members, number of events, board members, suppliers and scholarships, a combination that has not been seen in the industry for years. It was a spectacular year and in order to thank the member companies and all of the people involved for such a strong year a party was thrown at Brandywine Prime, a landmark upscale steakhouse in Chadds Ford. The Christmas party was a complete sell out and the facility was packed with industry veterans and newcomers alike! With butlered hors d'oeuvres, a full top shelf open bar, a complete 4 course steak dinner and prize giveaways for attendees there was something for everyone!



The party was kicked off by Chuck Halpin from Brighton-Best who welcomed all to the party and thanked everyone for the continued support the organization has enjoyed. The 2017 Board

of Directors: David Myers, Lee Johnson, Trish Murty, Jeannie Kondraski, Bill Bankoske, Barb Shimer and Chuck Halpin quickly handed over to the three new board members, Justin Myers, of Coburn-Myers Fastening, Meaghan Carrigan of Lubker Distribution and Freddy Barr from Stelfast, who took the reins for the organization, ran the meeting and are already vested in the future of the organization. A boost to social media and younger membership is anticipated as the year continues.



The event was sponsored by numerous companies: Gold: Stelfast, ND Industries and Kanebridge. Silver: Brighton-Best, XL Screw and Ford Fasteners. Bronze: Lee Johnson Assoc., Haydon Bolt, Murty Assoc., McCormick Assoc., TW International, Sems & Specials, Guidon Corp., Elgin Fasteners, Lubker Distribution, SB & W and Aerospace Nylock. As a special sponsor a past scholarship winner, Kaite Shimer, donated as a thank you to the association.

2018 events for the association include: A Philadelphia Flyers Game Outing scheduled to be in a private box on February 22nd, an educational event held in conjunction with the Fastener Training Institute, the annual golf outing, our premier event and a night at the races that will incorporate racing and Harrah's casino for a full slate of events.

This is a year to make sure you are involved in the association and networking with members from the entire



industry to insure that you gain all advantages for your business that are associated with Mid-Atlantic Fastener Members.

Look for more information at www.mafda.com. 

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F	I	L	A	O	S	C	A	N	A	D	A

COUNTRIES OF THE WORLD

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. KENYA _____ | 11. _____ |
| 2. _____ | 12. _____ |
| 3. _____ | 13. _____ |
| 4. _____ | 14. _____ |
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| 10. _____ | 20. _____ |

Upset Problems

Most heads are formed in a process called upsetting. Although a slight oversimplification, one might think of it as the process of accumulating or “bunching” material so that the cylindrical blank one starts with grows in diameter. Another way to think about it, it's the way that material is moved around to form the head. This process is usually done in two steps, so that there is a first and finish blow used to move enough material to provide a dimensionally correct final head shape.

When something goes wrong in one of these two steps, the final part may be seriously compromised. Figure 10 illustrates what manufacturers often refer to as a “baseball cap” because its shape roughly resembles the bill and cap portion of such a hat. Although there may be a variety of causes for this problem, it is most commonly the result of either the first blow upset tool wearing out or failing so that it is no longer able to contain the material being formed or from a sliding blow upset failure. A sliding blow upset is a spring loaded tool that allows the punch tooling to move within the die. If the spring used is not stiff enough and prematurely breaks, is over compressed, or simply fatigues from too many cycles, the tool fails to function as intended and results in an upset failure representative of Figure 10.



FIGURE 10: “BASEBALL CAP” HEAD

Thread “Sliders”

Most externally threaded fasteners are rolled between dies. This is a forming process where material is moved

to generate the desired thread forms. To work, threads must rotate in or through the die. Although the roll dies are manufactured in ways that encourage the part to start rotating, occasionally a stubborn part fails to do so. In these cases, instead of rotating through the die the part slides. When they slide through the die instead of rotating so that all the forming action is disrupted and a part like the one in Figure 11 is produced. Clearly this part cannot be assembled.



FIGURE 11: PART THAT SLID THROUGH ROLL DIE

Drunken Threads

Similar to the discussion above, another common rolling problem is “Drunken Threads”. When a part is not introduced squarely to the die, i.e. is slightly tilted, the part is likely to form an incorrect helix angle. In the worst case conditions this will result in a part that is unable to be assembled with a mating thread.

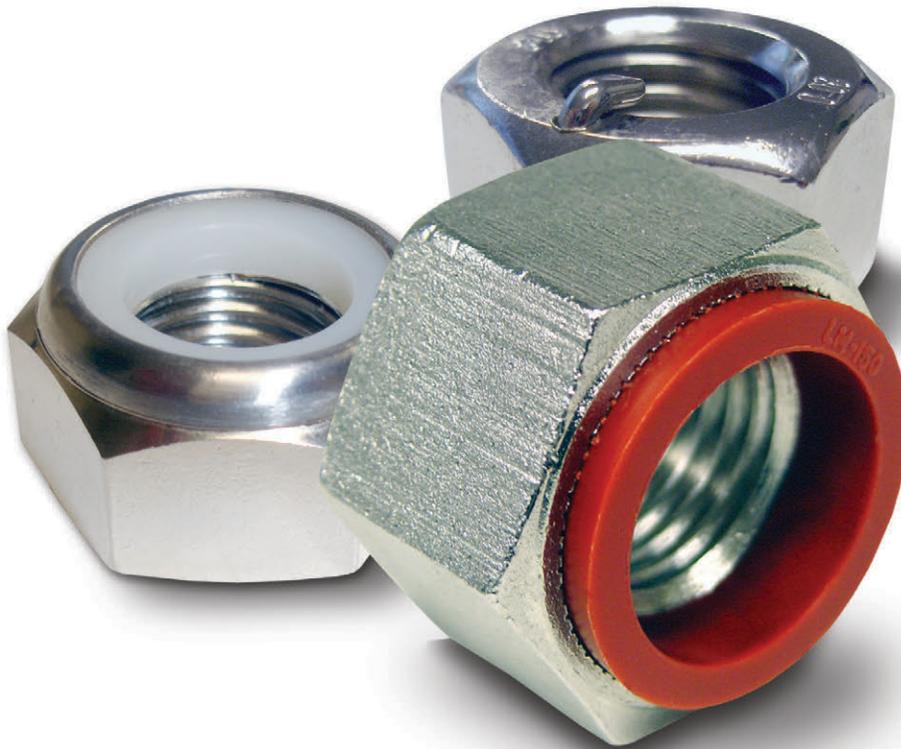
Flat Threads

A part that is exposed to excessive tumbling or handling can experience having the sharp crests of its threads flattened down. Figure 12 illustrates a particularly egregious case of this. In fact, this part got caught in a wheelabrator conducting a mechanical scale removal operation and was repeatedly “pounded” by part loads until it finally dislodged and came loose.



FIGURE 12: FLAT THREADS

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RICHARD HAGAN FASTENER COMPANY ACQUISITIONS COMPLETED DURING THE SECOND HALF OF 2017 from page 172



On October 12, 2017, **Threaded Fasteners Inc.** (“TFI”) purchased

Stateline Fasteners Inc. (“Stateline”). Founded in 2010 and located in Rossville, Georgia, Stateline is a locally-focused fastener distributor with an MRO and OEM customer base. Following the transaction closing, the Stateline staff and operations were relocated to TFI’s existing branch in Chattanooga, Tennessee (approximately 10 miles away). Founded in 1979 and headquartered in Mobile, Alabama, TFI manufactures and distributes fasteners for heavy construction and general industrial applications. The end-user industries served by TFI include power transmission, chemical processing, highway & lighting structures (DOT), metal building fabricators and heavy construction. The company operates six distribution centers in Mobile, Alabama; Panama City & Pensacola, Florida; Gulfport, Mississippi; Chattanooga, Tennessee; and Tulsa, Oklahoma with more than 180,000 square feet of total warehouse space. TFI is an employee-owned company with more than 140 employees.

Purchase price: not available



On October 30, 2017, **Shoreview Industries LLC**

(“Shoreview”) purchased **Winzer Corporation**. Founded in 1978 and headquartered in Plano, Texas, Winzer is a nationwide distributor of fasteners and consumable maintenance supplies. The Winzer product range includes fasteners, electrical components, hydraulic fittings, automotive hardware, cutting tools, abrasives and many more. The company supplies the MRO requirements of a broad range of end-user markets including general industrial, automotive, institutional and government. A privately-owned company, Winzer markets and sells its products via a network of more than 275 independent, route-based franchisees. The company operates four strategically located distribution hubs in Plano, Texas; Sparks, Nevada; Saginaw, Michigan; and Santa Fe Springs, California. Founded in 2002, Shoreview is a Minneapolis, Minnesota-based private equity firm with \$900 million of committed capital under management.

Purchase price: not available



On October 31, 2017, **LISI S.A.** (Link Solutions for

Industry or “LISI Group”) purchased 51% of the share capital of **Termax LLC**. Founded in 1971 and headquartered in Lake Zurich, IL, Termax is a developer and manufacturer of specialty clip fasteners used predominantly for automotive and transportation applications. Products include plastic clip fasteners, sealing fasteners, birds beak (snap-in) fasteners, tether fasteners and magnetic fasteners. A privately-owned company, Termax operates a 120,000 sq ft manufacturing plant in Lake Zurich and a 40,000 sq ft plant in Suzhou, China. Termax employs more than 400 people and generated net sales of approximately \$74 million in calendar 2016. Established in 1968 and headquartered in Belfort, France, LISI Group is a multinational manufacturer of fasteners, assembly hardware and specialty metal components. The company operates via three segments: i) LISI Aerospace (63% of total net sales); ii) LISI Automotive (29%); and iii) LISI Medical (8%). LISI Group operates 44 principal manufacturing facilities in 13 countries and employs more than 11,500 people worldwide. The company generated net sales of €1.57 billion in calendar 2016. The purchase of Termax was structured as a two-step transaction with 51% of the share capital sold at closing and the balance of the shares to be sold by year-end 2021.

Purchase price: not available



On October 31, 2017, **Brighton-Best**

International Inc. (“Brighton-Best”) purchased **W&G Industries Pty. Ltd.**, doing business as Koala Nails. Founded in 1981 and headquartered outside Sydney, Australia, Koala Nails is a stocking master distributor of construction fasteners. The company’s product range includes common nails, screws & staples, collated nails, screws & staples and self-drilling deck screws, along with pneumatic installation tools. A privately-owned company, Koala Nails operates two branch warehouses in Perth and Brisbane. Founded in 1965 and headquartered in Long Beach, California, Brighton-Best is the largest full-line fastener importer and master distributor in the United States. The company maintains one of the broadest fastener product ranges in the world, along with hand tools and consumable industrial supplies. Brighton-Best operates 32 distribution warehouses in the United States (21), Canada (3), Mexico, Brazil, United Kingdom, Australia (4) and New Zealand.

Purchase price: not available

distributornews

J.W. Winco, Inc., A Ganter Company, a leading supplier of standard industrial machine components, announced the offering of GN 653.2 Steel & Stainless Steel Flat Knurled Thumb Screws with Recessed Stud for Loss Protection.



The thumb screws, which are RoHS compliant, can be used to prevent loss of the thumb screw, due to the recessed portion of the stud. When using, instead of a typical tapped and bored hole, it is necessary to provide tapped bores with a thread on each of the two elements to be assembled. Additionally, a clearance bore on one or both sides is required.

Depending on the design and required clamping length of the component being attached, there are a number of assembly options. The steel knurled thumb screw body with a black oxide finish has tensile strength of class 5 and the visible face is fine turned. The stainless steel version is made of 303 stainless steel and comes with a matte, shot-blasted finish.

JW Winco, which is ISO 9001:2008 certified, is located in New Berlin, Wisconsin, with sales 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@jwwinco.com. JW Winco's new website, with improved 3D CAD and online buying, is viewable at www.jwwinco.com.



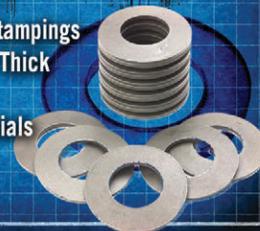
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By the time it did, however, the threads were badly flattened and rolled over to the extent that they actually trapped some of the glass beads from the descaling process. Although this is an extreme case, there are multiple types of fasteners that depend on sharp crested threads to assure easy assembly, so that any flattening of threads poses performance problems.

Nicks and Handling Damage

In a related problem to flattened threads, many parts are exposed to rough handling conditions. These rough handling situations have a tendency to place nicks in threads and dings on unthreaded surfaces. More often than not, these simply result in unsightly blemishes that may be a nuisance to the end user. In the worst cases, however, nicked threads or burrs resulting from damaged areas of the surface prevent assembly.

Handling damage occurs as the result of multiple causes. It is crucial, therefore, when troubleshooting a handling problem that each process step and part movement is carefully evaluated. Damage may be occurring as the result of part-on-part contact, contact with hard surfaces as a part exits a machine, or as a result of the containers and practices used to transport parts between process steps.

Nuisance Problems

Foreign Material

There are many industries that might argue the case that foreign or mixed material should be categorized as a problem far greater than a mere nuisance. I imagine that they likely have solid reasons for this and, in fact, we may agree with them. Therefore, by categorizing this particular problem in the nuisance category, I am neither trying to make a particular statement or diminish the nature of this problem. I am placing it in this category, however, because foreign material will likely not result in an immediate or progressive failure or the inability to assemble parts (at least not in a practical sense).

Foreign and mixed material occurs when parts are exposed to poorly controlled handling practices, handling accidents (such as spilling an entire container of parts),

or bulk processes that expose a production lot of parts to stragglers from previous and other production lots. Certain consumers find mixed material extremely troublesome because it has a tendency to jam their assembly line equipment. Other industries find it extremely troublesome because mixed parts could be unknowingly assembled into their product. In all cases though, whether significant problem or just a nuisance, foreign material is a problem that the industry must continue seeking practical solutions for.

Plating Color and Coating Condition

Another nuisance problem would be variation in plating color or condition. Electroplated parts are often produced out of a variety of colors. Sometimes these finishes exhibit variation in the brilliance of the color or in the presence of iridescence. Such issues rarely portend a deeper problem or even a reduction of the desired performance, but because they relate to appearance or a visual expectation not being met, they are a problem. Additionally coated parts often are subject to contact marks. Once again, these rarely if ever effect performance, but may be considered a nuisance or unattractive by the end user.

Conclusion

Although manufacturing defects can have a negative impact on part quality and the perception of the customer regarding the part's supplier, most fastener failures are the result of causes described in Part's One through Three of this series. It is important, however, for fastener distributors and consumers to understand the more common of these manufacturing defects and the potential problems they can create.

Throughout this series we have explored how and why fasteners fail, illustrated, in some cases, with real life examples. Hopefully you have gained a greater appreciation for the criticality of fasteners and their application. Fasteners are not simply a "low cost, class C" item. They should never be considered or made to become an afterthought at the end of the design cycle, but rather be respected for the critical, key, and highly engineered components that they are. 

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RICHARD HAGAN FASTENER COMPANY ACQUISITIONS COMPLETED DURING THE SECOND HALF OF 2017 from page 178



On November 1, 2017, **Adolf Würth GmbH & Co. KG**

(“Würth Group”) purchased **Weinstock Bros. Inc.** Founded in 1898 and located in Valley Stream, NY, Weinstock Bros. is a regional distributor of high strength structural bolts and general supplies for the structural steel industry and related fields. In addition to a full range of heavy construction fasteners, the company’s specialized product range includes installation tools, fabricating equipment, rigging, ironworker accessories and consumable supplies. Following the transaction closing, Weinstock Bros. became a business unit of Würth Industry of North America (“WINA”), one of the largest fastener and Class C component distributors in North America. Weinstock Bros. is particularly complementary with House of Threads Inc. in Birmingham, Alabama, also a construction fastener distributor which was acquired by WINA in April 2016. A privately-owned company headquartered in Künzelsau, Germany, Würth Group is comprised of more than 400 companies in more than 80 countries. Würth Group employs more than 70,000 people worldwide and generated net sales of €11.8 billion in fiscal 2016.

Purchase price: not available



On November 8, 2017, **The Hillman Companies Inc.** (“Hillman”) purchased **Hargis Industries LP**, doing business as ST Fastening

Systems (“STFS”). Founded in 1992 and headquartered in Tyler, Texas, STFS designs, manufactures and distributes specialty fasteners and hardware for construction applications. The company’s products are sold to metal building fabricators, hardware wholesalers and building products distributors across the United States. The company’s proprietary product range includes metal-to-metal and metal-to-wood self-drilling screws, along with fastening and sealing products for venting, flashing and roofing applications. A privately-owned company, STFS changed its name from Sealtite Building Fasteners in March 2017. Founded in 1964 and headquartered in Cincinnati, Ohio, Hillman is a value-added distributor of fasteners, key duplication systems, engraved tag systems and DIY assembly hardware. The company’s customer base

includes home improvement centers, national & regional hardware chains, mass merchants and pet supply stores. Hillman supplies more than 26,000 retail customers in the US, Canada, Mexico, South America and Australia. The company employs approximately 3,000 people and generated net sales of \$815 million in calendar 2016. Hillman is a portfolio company of **CCMP Capital Advisors LP**, a New York City-based private equity firm.

Purchase price: not available



On December 1, 2017, **Bufab AB** purchased **Kian Soon Mechanical Components Pte. Ltd.** (“Kian Soon”). Founded in 1977 and headquartered in Singapore, Kian Soon is a full-service distributor of fasteners and Class C components. The company specializes in providing customers with advanced supply chain management services, including vendor managed inventory, just-in-time deliveries, R&D technical assistance and kitting services. The company has subsidiaries in Indonesia and Malaysia, along with a joint venture in Thailand. Kian Soon employs around 64 people and generated net sales of US\$12.7 million in calendar 2016. Founded in 1977 and headquartered in Värnamo, Sweden, Bufab is a full-service distributor of fasteners and Class C components, specializing in providing customers with advanced supply chain management services. The company operates 35 wholly-owned subsidiaries in 25 countries and employs around 1,000 people worldwide. In calendar 2017, Bufab (Nasdaq OMX Stockholm: BUFAB) generated net sales of US\$388 million.

Purchase price: US\$10.3 million cash and US\$5.4 million of future contingent payments



On December 1, 2017, **Hodell-Natco Industries Inc.** (“Hodell-Natco”) purchased **Davco Fastener Inc.** Founded in 1986 and headquartered in Twinsburg, Ohio, Davco Fastener is a full-service distributor of fasteners and Class C parts, specializing in providing its predominantly OEM customer base with customized supply chain management solutions. The company supplies a variety of end-user markets including automotive & heavy truck, appliances & food service equipment, electronics & medical devices, firearms & military, windows & doors and oil & gas.



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RICHARD HAGAN FASTENER COMPANY ACQUISITIONS COMPLETED DURING THE SECOND HALF OF 2017 *from page 182*

A privately-owned company, Davco Fastener employs more than 25 people and maintains a branch warehouse in Houston, Texas. Founded in 1984 and headquartered in Cleveland, Ohio, Hodel-Natco is a full-service distributor of industrial fasteners and chain products. The company has more than 300,000 square feet of warehouse space and five branches in St. Louis, Missouri; Houston, Texas; Columbia, SC; Orlando, Florida; and Reno, Nevada. The acquisition of Davco Fastener represents a further move by Hodel-Natco away from selling to distribution and into providing advanced supply chain management solutions to OEM end-users. In March 2017, Hodel-Natco sold its “packaged fastener and master distribution division” to Lindstrom LLC.

Purchase price: not available



Micro Plastics, Inc.

On December 12, 2017, **Essentra plc** purchased **Micro Plastics Inc.** Founded in 1961 and headquartered in Flippin, Arkansas, Micro Plastics is a

developer and manufacturer of injection molded nylon fasteners and assembly hardware. The company's product range includes screws, nuts, washers, panel fasteners, spacers, bushings, wire handling clips and many more. A privately-owned company, Micro Plastics operates from a 280,000 square foot manufacturing and office facility in Flippin, along with a satellite plant in Monterrey, Mexico. The company employs more than 450 people and generated net sales of \$26.8 million in the fiscal year ended June 30, 2017. Headquartered in Milton Keynes, England, Essentra (London Stock Exchange: ESNT) is a diversified manufacturer of specialty products and components produced from plastic, fiber and foam, along with specialty packaging products. The company operates via three business segments: i) Component Solutions; ii) Filtration Products; and iii) Health & Personal Care Packaging. Essentra operates 48 principal manufacturing facilities in 33 countries and employs more than 8,000 people worldwide. Essentra generated net sales of £998 million (US\$1.38 billion) in calendar 2016.

Purchase price: not available ○

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distributornews

Würth Industry North America (WINA)

announced the appointments of Mike Buchanan and Miscal Mena. Buchanan has been named Vice President of Finance, and Miscal Mena, currently Project Manager for Central and South America, as well as Sales Manager for Mexico, has been promoted to Head of Business Development for Latin America. Buchanan and Mena will both report to Marc Strandquist, Executive Vice President of the Würth Group.

Buchanan will be responsible for directing the finance strategies, analysis, forecasting, and budget management for the business unit, as well as ensuring that financial policies and practices are compliant with corporate and accounting standards. He comes to the team with a broad background in finance, support services, and business planning. Most recently, he held the position of Vice President, Finance and Support Services for SUEZ – Advanced Solutions in Atlanta, GA. Buchanan received his B.S. degree in Business Administration from The Citadel, and his MBA from DePaul University. He is a Certified Management Accountant and Certified in Financial Management.

Mena joined WINA in 2017 to oversee the growth and development of the company's Central and South American customers and increase Würth's market presence. Recently named Head of Business Development for Latin America, he will lead the Würth Industry de Mexico set up and efforts to develop Mexico into a stand-alone operating company. In addition to his new responsibilities, he will continue his efforts in Central and South America, developing a strategic plan for growth and expansion. Reporting to Mena in this role are Victor Campos, General Manager for Würth Industry de Mexico, and Pedro Ramos, Managing Director for Würth SW Industry (SW) in Brazil.

"We are delighted to welcome Mike and Miscal to our leadership team," said Marc Strandquist, Executive Vice President of the Würth Group. "They both have a wealth of experience and knowledge that will benefit our North and South American organizations."

For more information on Würth Industry of North America and the Würth Group, please visit the website www.wurthindustry.com.

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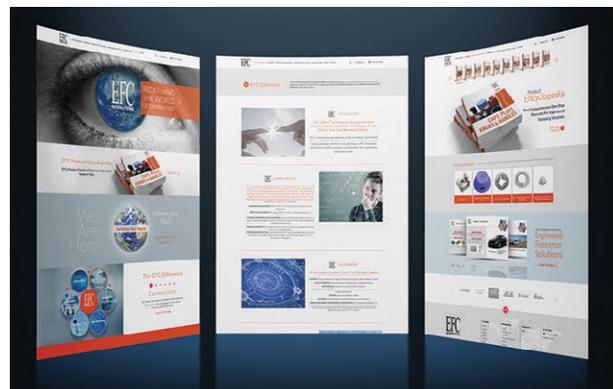
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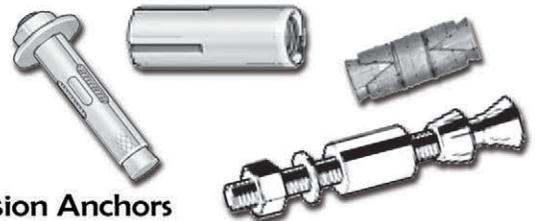
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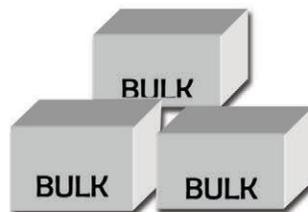
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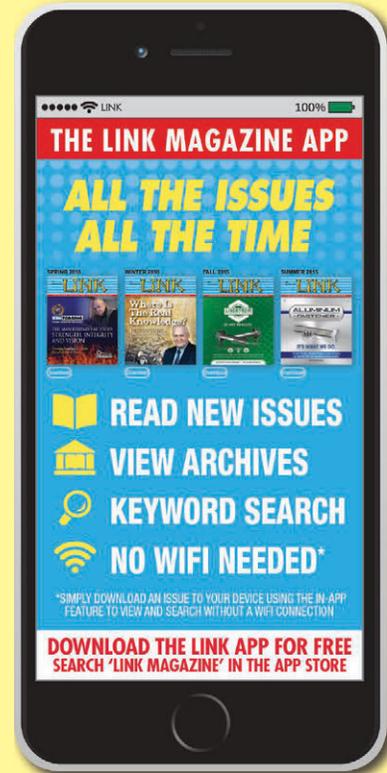
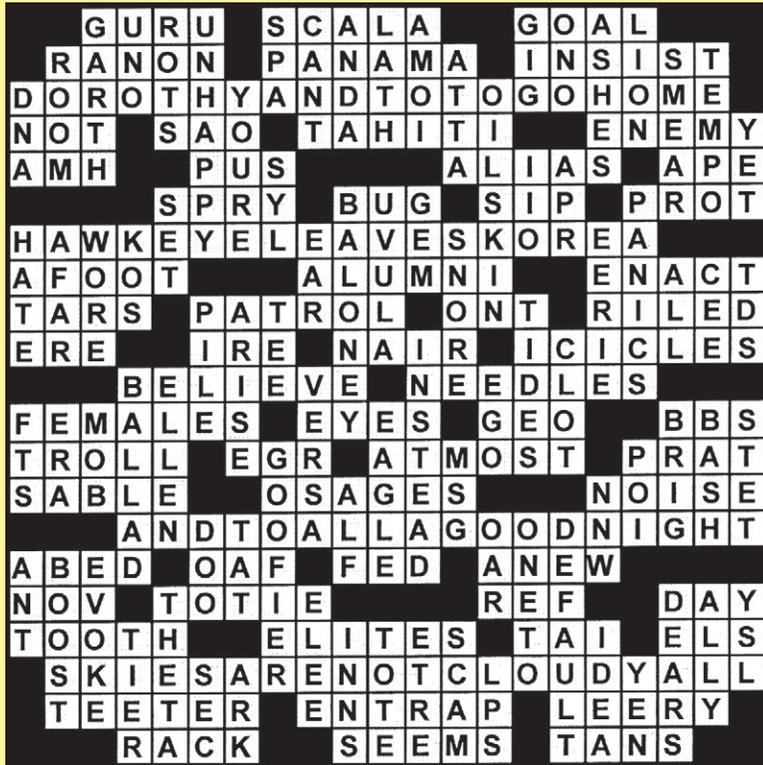
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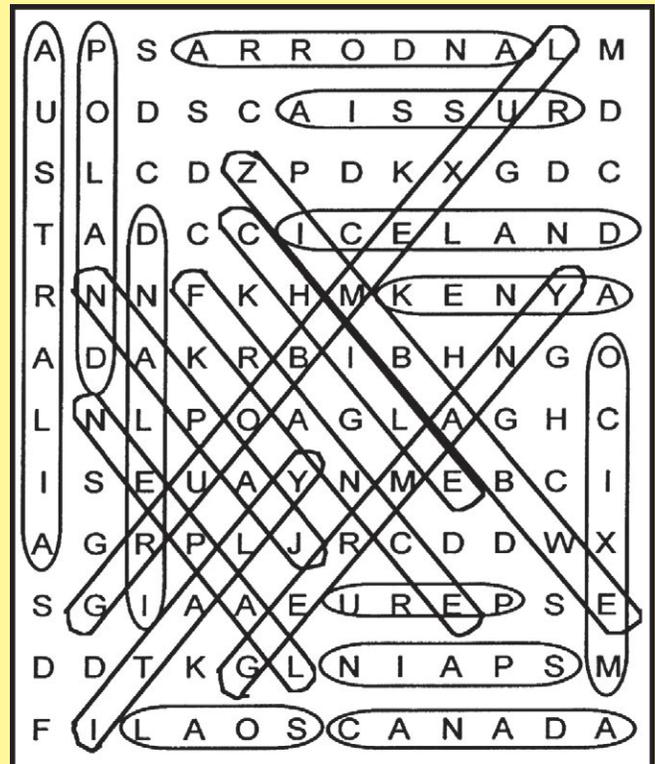
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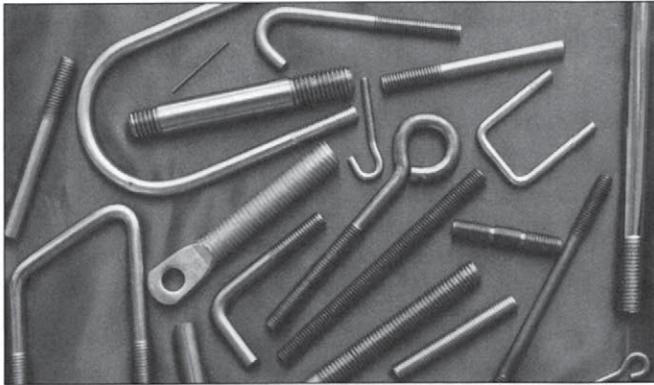


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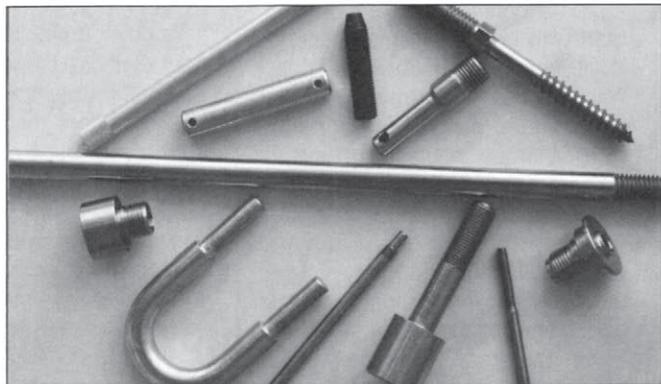
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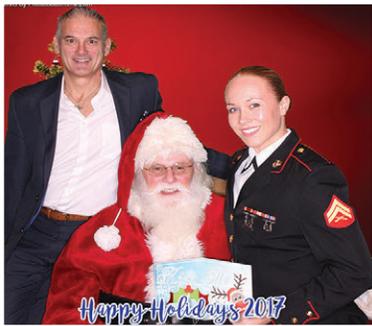
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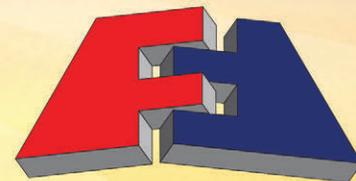
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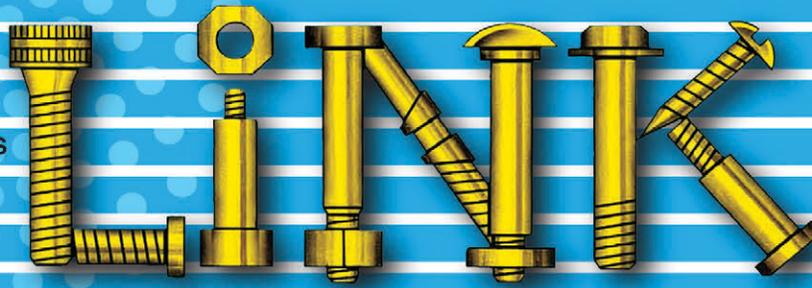
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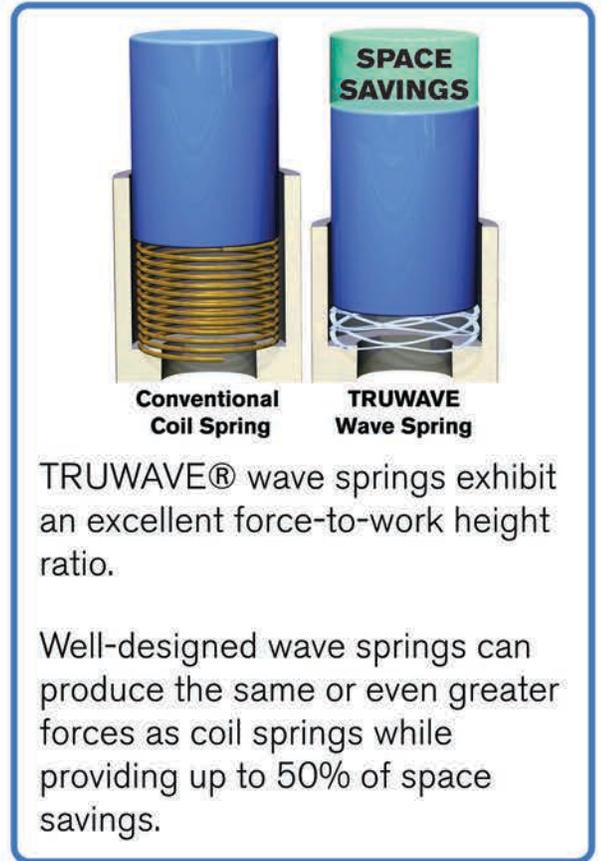
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