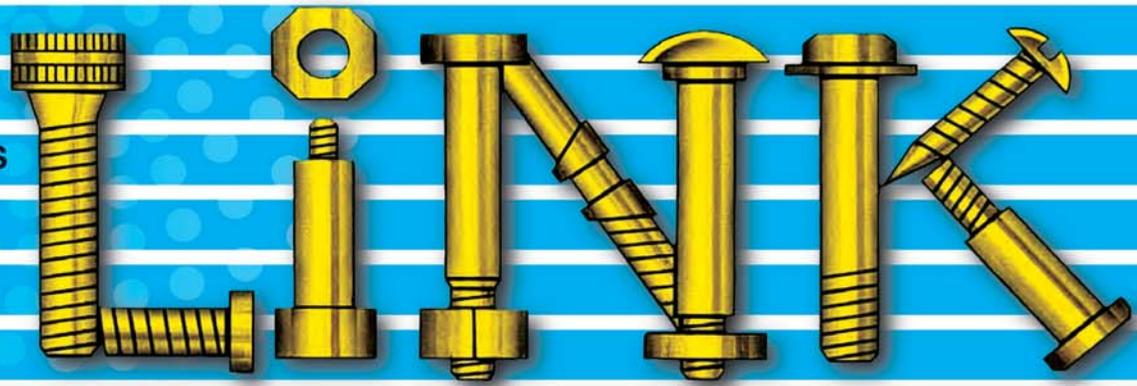


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THE SAGA BEGINS ON PAGE 16..

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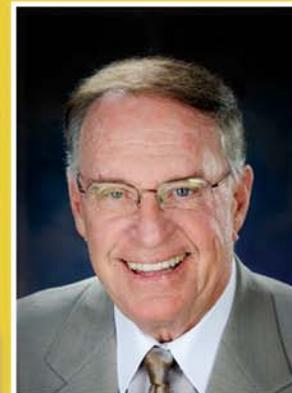
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# DISTRIBUTOR NEWS

## OBITUARY

**Raul Torres 1935-2013**



Raul Torres, who spent his entire career in stainless fasteners, died July 21, 2013, in Illinois. He was born October 7, 1935 and began his 50 year career in the early 1960's with Schnitzer Alloys in New Jersey. Raul then went on to Albany Products, Action Threaded Products and Star Stainless Screw Co.

He had been a member of the National Fastener Distributors Association board, the Scholarship Committee for the MWFA and his involvement with ASTM came about due to his specialized knowledge of stainless. Over the years, Raul was a friend and mentor to many. He was a true gentlemen and his passing is a loss to the fastener industry.

*Messages to the family may be sent c/o Star Stainless, 810 Aec Dr., Wood Dale, IL 60191.*

**E Z Sockets, Inc.**, headquartered in Springfield NJ invites fastener distributors to visit their new Website & Distributor Shopping Cart.

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At **Cable Tie Express** we believe that maintaining the highest customer service level should always be our top priority. As such, we have recently added two new Inside Sales Representatives to our staff, Jordan Shanks and Jason Burton, to help us meet that goal.

We are now able to provide our distributor customers with a dedicated representative providing quick turn around and personalized service. Furthermore, Joe Gillis has been named Director

of Operations, and is responsible for the overall service and performance of Cable Tie Express.

Our entire staff invites you to visit our new website which includes blogs, training aids and a complete downloadable catalog.

*For additional information on products or services, contact Cable Tie Express at 1-888-603-1233, Fax 1-800-695-1233, email [sales@cabletieExpress.com](mailto:sales@cabletieExpress.com). Alternatively, visit our website [www.cabletieExpress.com](http://www.cabletieExpress.com) where the double EE stands for Excellence! We look forward to your inquiries.*



*Jason Burton (left) and Jordan Shanks (below)*

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## Bengt Blendulf

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

## FASTENER TERMINOLOGY & DEFINITIONS

To fully understand, and to properly communicate, technical data and properties for fasteners, all those involved in this business need to know how to use fastener standards. There are so many terms involved that not knowing what they mean can cause serious mistakes. In addition to the basic behavior of fastener- and joint materials, there are also the complications of using the different systems of units (inch-pound and SI metric). In this article we will explore some of the mechanical properties of fasteners and also how they are expressed in inch and metric standards and specifications.

I have over time suggested to my readers (and to my students) that screws and bolts should be looked upon as "glorified rubber bands". For most people, a steel bolt would appear to be an ultimately very hard and unyielding piece. But, if a designer treated the fastener as a truly stiff piece (some designers do), the joint she/he was designing would not work very well unless it was in a pure shear joint. For the purpose of illustrating the "normal" use and utilization of threaded fastener, let us consider the graph in Figure 1 in our discussion.

On the vertical axis (y) of the diagram we can find a force or stress acting along the axis of the fastener. This force can be expressed in the metric unit newton (N) and the

stress as megapascal (MPa). In the older inch system a force unit would be pound force (lbf) and stress pounds per square inch (PSI). The newton unit is relatively small, about 0.22 of the lbf and is therefore often written with a prefix, i.e. kN meaning thousands of newtons. It is important that we use a low case k here, because K (capital) means the SI

unit kelvin (thermodynamic temperature) that has absolutely nothing to do with prefixes. It is also important to use lbf to indicate a force, lb only to specify mass (weight). For SI metric, the force N (newton) and the mass (weight) kg (kilogram) now use separate units to be useful in today's technologically advanced environments. A person of 80 kg (176 lb) would push a scale to show 80 kg on Earth, but only to about 13 kg on the moon due to the lower gravitational pull. That is why separating mass and force is desirable from a technical point of view.

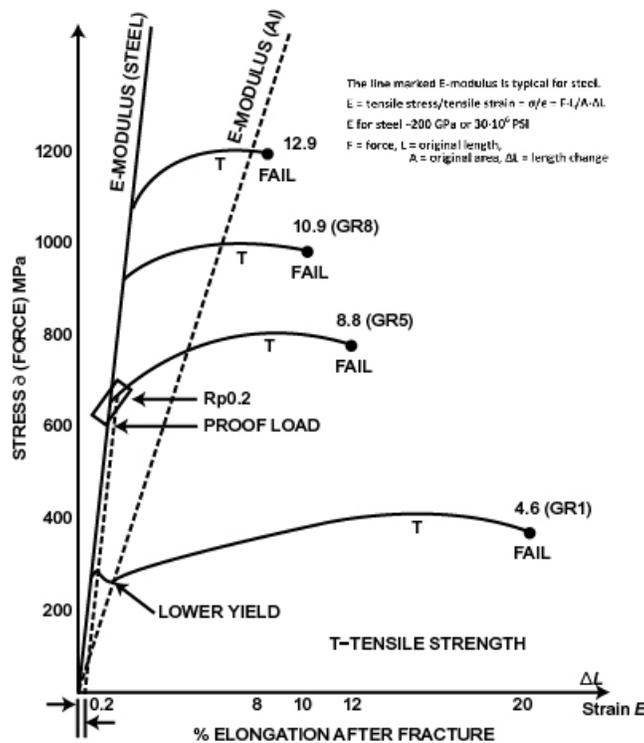


Figure 1

If you look at some older ISO specifications or standards you may notice that stress levels are indicated as newtons per square millimeter (N/mm<sup>2</sup>). This is now being changed to MPa or megapascal in new revisions. MPa = N/mm<sup>2</sup> but is much easier to type and that is probably the reason for this nonsense. Stress should mean a load over an area like we also have in the PSI expression (pounds per square inch). I guess we (I) just have to live with it.



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## Robert B. Footlik

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

## SECURITY CONSIDERATIONS - PART 2

As any experienced Police Officer or Customs Agent knows people are the best indicators for detecting dishonesty. Even TSA has finally realized that training in human behavior is more important than full body scanners. An observant individual might not know exactly what is going on, but they do know that something is amiss. You can too.

Many of the characteristics and mannerisms are so overt that they scream out if you know how to listen. Spot these individuals before they sink your business or make the evening news.

### Becoming More Observant

Unless you have a very unusual customer base there is no reason why your employees should come to work armed with knives, guns, brass knuckles, chains, etc. Yes this seems obvious, but how many Fastener Distributors have rules prohibiting weapons at work.

A more important question is why the individual feels the need for being armed in the workplace? Are they being intimidated, or doing the bullying? Is your environment so unsafe that they cannot leave the armament in their car? While a duly appointed Officer of the Law is required to carry a gun, even in states where concealed carry is legal it is not mandatory. If this is also an employee who is antagonistic, disgruntled, complains about being underpaid or overworked taking away their arsenal is obviously a great idea. Encouraging them to seek employment elsewhere is even better.

The individual to especially watch is the one who never takes time off or a vacation and even comes in on their day off to "help out." All too often the "help" is to cover up what has already being done to sabotage or rob your firm. Every person needs a vacation and while they are away an act of dishonesty may come to light. This is not to sell short the true workaholic, but remember that no individual should be

indispensible unless they make themselves that way to cover up illicit activities.

Collusion between employees can be more difficult to detect but if the crew has created a "theme song" or whistle to announce your presence you can be certain that something is going on. Hand signals, whistles or flashing lights are often a tip off. Security personnel who are overly friendly can also be working with inside or outside thieves. They too are not above suspicion.

Secretive conversations, cryptic messages with customers, truck drivers, common carriers and others are other indications of a problem.

Certainty comes with further investigation and surety is guaranteed when one or more of the participants comes in early and/or leaves late on a regular basis.

Watch for visitors and employees who are in areas where they have no legitimate business. This includes common carriers, service technicians and customers. Badge systems, hard hat requirements and carefully designed paths should limit access strictly as needed. Similarly tracking truck drivers using GPS, odometer readings and bar coded paperwork will help keep them both efficient and honest.

Another ancient ploy is distraction.

Holding or delaying a supervisor for no apparent reason can mask many activities by a confederate. This is extremely difficult to control if you are unaware it is being done. In many respects it is similar to shoplifting and the secret is to focus on the buddy rather than the one who is distracting you.

Similarly bulging clothing, loose fitting garments, are a good indication that this is how your inventory is disappearing. In a shoe distribution operation the manager was amazed by how many employees came to work wearing size 8 and left wearing size 12. Fasteners are less prone to theft, but tools, equipment and trade secrets are just as vulnerable.





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## **CELEBRATING 50 YEARS OF EXCELLENCE**

*by Richard Cavoto, National Sales Manager*

The concept for a 'one-stop metric shop' supplying a vast range of metric products came to life in 1963. Three men, originally from the Czech Republic, who spent over a dozen years residing in Ethiopia moved to the United States to chase that American dream of owning their own business and providing a solid life for their families. They quickly recognized a void in the availability of metric products. With their extensive background and knowledge of metric industrial products, they partnered together - Metric & Multistandard Components Corp. was born. MMCC introduced metric product lines to the US that ran the gamut from fasteners, wrenches, cutting and measuring tools, tubing and fittings, to unusual and unique metric specialty items. MMCC inventories over 36,000 items in its stock.

The Hacaj and Peske families continue to carry on the tradition of their fathers with that same commitment and focus. The essential building blocks of providing a vast range of high quality products along with superior service, MMCC's core values, have never changed. It is a company that opportunely goes that extra mile to satisfy their customer's needs. MMCC diligently ensures that all of its products conform to internationally recognized

standards. Metric & Multistandard has grown into an American organization, recognized as a premier stocking distributor of quality metric industrial supplies.

MMCC started at its headquarters in New York State with the goal of having a full stocking branch in all five regions of the United States.

Over the last 5 decades, MMCC completed that goal with branches in Georgia, Illinois, Texas and Nevada. Covering these five regions has provided MMCC the means for one day service to nearly all of the contiguous United States.

As MMCC celebrates its 50 years in business, we also celebrate MCG Metric Components GmbH's 20th year as MMCC's purchasing office in Germany. Aside from sending monthly sea containers, they also send MMCC large weekly airfreights – 50 plus per year... all in the name of service to our customers. If it's metric –

MMCC can get it in a relatively short time. MMCC has an in-house machine shop at its New York Headquarters to accommodate customers special needs. Our machine shop provides high quality custom-made parts and offers quick turn around on secondary operations. *Continued on page 162*



*Left to Right: Rich Cavoto - National Sales Manager  
John Gaudette - Branch Manager - Reno, NV  
Nancy Novak - Assistant Branch Manager - Burr Ridge, IL  
Rosemary Hacaj - Vice President of Sales  
Jim Dobbs - Branch Manager - Norcross, GA  
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## Guy Avellon

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

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

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

# THE IMPORTANCE OF PROPER HEAT TREATING

The heat treatment of steel is an art and an exact science. It is a delicate process that can in an instant, change the performance of the product without any external indications. That is, it may pass hardness and tensile strength but fail proof load testing or fail in service. Though complex, this article will try to bring understanding to this important process.

First, steel is one of the few elements that can exist in more than one type of crystalline lattice structure, which is known as polymorphism. If the change in structure is reversible, then it is known as an allotropic change.

When iron crystallizes at 2800°F (1538°C) its lattice structure is a body-centered-cubic (b.c.c. for short). It is also known as a delta iron. When the iron cools to 2554°F (1401°C) the structure changes to a face-centered-cubic lattice (f.c.c.), which is known as gamma iron and at 1670°F (912°C) the structure reverts back to a b.c.c. as an alpha iron.

Medium carbon steels are hypoeutectic. An iron-iron carbide equilibrium diagram (shown below) will indicate the relationships of temperature and carbon to the solubility of iron in different stages: ferrite and pearlite to ferrite and austenite to a full austenitic structure. Also, as temperatures increase, the iron's lattice structure changes from a face centered cubic (f.c.c.) to a body centered cubic (b.c.c.). Cold worked materials should be heat treated more slowly than stress-free materials to

avoid distortion.

During the heat treatment process, cap screws are brought to a controlled red hot temperature of 1666°F (912°C) in gas fired ovens. This temperature is usually above the upper critical temperature in order to form austenite. Time and controlled temperatures will produce steel with very high hardness: some steels will achieve a hardness up to 55 HRC. As a finished product, this is not desirable as the steel is brittle.

Special monitors in the gas fired ovens control the natural gas and oxygen mixture to govern the free carbon atmosphere and avoid unintentional carburization or decarburization. Carburization would produce excessive surface hardness from the addition of carbon, while decarburization would rob the threads of their strength by removing carbon from the surface of the thread crests.

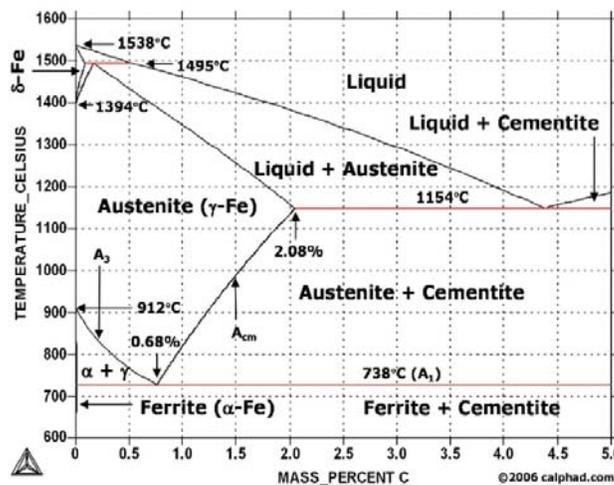


Figure 1

The importance of exact temperatures, times and cooling rates are extremely critical, which is why these thresholds are called upper and lower critical temperatures. When steel is heated above its critical temperature, the crystalline structure changes to austenite. When the steel parts are withdrawn from the furnace, the parts begin to cool very rapidly. It is when the steel reaches a temperature of 1333°F (732°C) that it becomes necessary to control the cooling rate. This temperature is the lower transformation line, also known as the Eutectoid Temperature. It is the same for all iron and steels.



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**A HERO EMERGES...**

# THE PLOT THICKENS...

## SOLUTION INDUSTRIES: YOUR SINGLE SOURCE

While working in a down manufacturing market with a local distributor in north-east Ohio, Don Shan knew what was on the horizon. "The vendor-managed inventory concept was no longer new to the industry," said Don. "Everyone was utilizing it and embracing the 'whatever it takes' philosophy in which we all fed from." He decided to lean on his friendships and experience to search for a solution.

John Radel, a local leading manufacturer and friend, proved to be just the sounding board needed in the search for the answer to various distributor problems. John's extensive machining capabilities, combined with a resume which included working with the largest distributors to the smallest manufacturers, mirrored Don's in many ways. Their paths crossed in 1977 at Service Bolt & Nut Company in Ohio. By working in the pre-fax machine era, the experience and connections developed proved to be invaluable in learning the industry and understanding the needs of fastener distributors.

The birth of Solution Industries finally gave fastener distributors worldwide an opportunity to single-source their fastener requirements. With a staff that combines over 100 years of fastener industry experience, Solution Industries takes on the hardest challenges when it comes to finding or re-working difficult parts.

"We started with semi-standard socket and hex head cap screws and slowly built our inventory to help service distributors nationwide," John noted. "By adding a full line of zinc plated sockets, left hand thread, drilled, cross drilled, and core drilled products, as well as pellet and patch work, we were well on our way."



PAGE 20 HAS MORE...

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**FROM THE SHADOWS...**

# **FIGHTING FOR ALL THAT'S RIGHT...**

Solution Man was the next invention to hit our market. Solution Man is the company mascot of Solution Industries. With the challenge of "Put Solution Man to the Test," Shan and Radel have received their fair share of strange inquiries.

"There have been very few items we have not been able to quote," explained Radel. "But every now and then someone sends in something that is just so strange that we wonder whoever came up with the part. But, for the most part, we quote just about everything that crosses our desk."

"Our ability to offer competitive numbers on standard products gives the distributor a unique opportunity to single source standards with specials on one invoice," explained Don. "We have the heart to succeed and the focus to prevail, and we have fun doing it."



**JUMP TO PAGE 22..**

# KEN FORGING

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So it begs the question - how big is big enough?? Watch this space!



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**MEANWHILE ON PAGE 132...**



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## Richard Hagan

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

# AN INTERVIEW WITH RICHARD HAGAN, THE PRESIDENT OF PINNACLE CAPITAL CORPORATION

**LINK** You are a regular contributor of articles about fastener industry deals for this magazine. Can you give our readers an overview of the business activities of Pinnacle?

**HAGAN** Pinnacle is a boutique investment banking firm which specializes in providing merger & acquisition advisory services to the global fastener industry. The majority of the projects we undertake are sale assignments, but we also assist clients with acquisitions, strategic investments, joint venture partnerships, business valuations and fairness opinions. The typical Pinnacle client is the owner of a fastener company - manufacturer or distributor - who has decided, for whatever reason, that he wants to sell his company. We also frequently work with public company clients on divestitures of business units or subsidiaries which, for whatever reason, are not considered to be a good strategic fit for the parent company going forward.

When Pinnacle is hired to sell a fastener company, we are typically involved in all phases of the deal process. We first prepare a detailed Offering Memorandum on the client company, along with a Target Prospective Buyer List. We manage the offering process with prospective buyers and we are very involved in negotiating the terms of the sale transaction. We also assist with the due diligence process conducted by the buyer and with the drafting of the final Sale / Purchase Agreement. In short, Pinnacle assists and advises its client in all the steps necessary to complete a transaction.

**LINK** And you focus solely on the fastener industry?

**HAGAN** Yes. We have focused exclusively on fastener industry mergers & acquisitions since Pinnacle was formed in 1993.

**LINK** What led you to focus on a single industry and why fasteners?

**HAGAN** I started working in the M&A field in 1987 when I landed a junior analyst position in the New York office of International Pacific Securities Limited (IPS), a small, publicly-traded Australian investment bank. IPS was founded by Geoffrey Hill and his team of bankers who left the Sydney office of Morgan Grenfell & Company to form their own firm. IPS focused primarily on Australian domestic and cross-border mergers & acquisitions. We had offices in Sydney, New York and London.

When I joined IPS, we had a strong roster of very acquisitive clients, including many of the high-profile conglomerate-builders who at that time were using readily available debt to build their corporate empires. Our client list included John Spalvins of The Adelaide Steamship Company and Alan Bond of Bell Group Limited. I

learned the M&A business working on deals in all types of industries ..... from gold mining to time-share development ..... from outdoor advertising to plastic bag manufacturing.

In 1991, IPS was hired by The Lamson & Sessions Company (NYSE: LMS) to sell their automotive nut manufacturing subsidiary located in Plettenberg, Germany. This was a transaction I personally initiated and I was the project manager from start to finish. Lamson & Sessions GmbH was ultimately sold to Koninklijke Nedschroef Holding N.V., a Dutch automotive fastener manufacturer, in December 1991. That was my first fastener deal. It was during the 1990-1992 period that many of the high-profile conglomerate-builders and corporate raiders in Australia began to experience debt-service problems. Now IPS was working on divestitures and debt-restructuring projects rather than acquisitions.



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## DISTRIBUTOR NEWS

**Century Fasteners Corporation.** is pleased to announce that it has become an authorized distributor for Cherry Aerospace.

This landmark agreement gives customers broader access to the industry-leading line of aerospace fasteners.

In addition to making world-class Cherry products more broadly available to distributors and OEMs, the new partnership expands Century's existing services to the manufacturing community by enabling the company to provide deeper bill of material coverage to complement its product offering.

"This partnership marks a milestone in Century's evolution by enabling us to provide even broader material coverage competitively to the marketplace," said Evan Stieglitz, company co-president.

Century's strategic presence in Mexico is said to have been a factor in the finalizing the distribution agreement, he said, adding that as the new relationship takes hold, Century will now be able to focus on key suppliers to The Boeing Company, Lockheed Martin, General Electric, and Airbus.

Century Fasteners Corporation is a Master Distributor of both fastener and non-fastener components to all the major industrial markets including military, aerospace, electronics, automotive, sheet metal fabrication, contract manufacturing, telecommunications and the medical industries.

The ISO9001:2008 and AS9120 Rev.A certified company stocks more than 100,000 discrete parts in addition to offering a wide variety of value-added services, including, but not limited to; VMI in-plant programs, custom kitting, engineering services, and supply chain management solutions.

*For Cherry Aerospace product quotes, contact Century Fasteners Corporation toll-free at 1-855-331-4445 or email your requirements to [aerospacesales@centuryfasteners.com](mailto:aerospacesales@centuryfasteners.com).*

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## THE SOUND OF SUCCESS

Some might describe it as jarring racket or thunderous clatter but to Peter Mess and the employees of MW

Industries it is sweet music.

From early morning to close of business,

these are the sounds that flow through their production facilities. It is the sound of success for a thriving company who has a firm grip on today and tomorrow. Despite the down-turned economy of the past five years, MW Industries has continued not only to surpass their manufacturing goals but continue to grow. For almost four decades, **"We**

**have believed in America,**

practiced timeless business principles and then exceeded the needs of

our customers," explained Peter.

Regarding the future, he stated, "Though we will contend with many of the same issues

of uncertainty that other manufacturers face, we will prevail because of our perseverance and commitment to outstanding service.



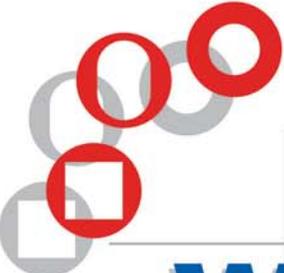
Beginning each day with tomorrow in mind helps MW Industries stay in front of any curve balls that come their way.

Upgrading existing equipment and adding new machines are a part of their standard operating plan. In the past 12 months, MW has added a surface grinder, two Hurco CNC Mills and a production band saw.

So, stay tuned by visiting their website often, whilst being mindful that their manufacturing facilities will never be completely finished - - and that's good, that's progress.

Stop by and see MW Industries' staff at the National Industrial Fastener and Mill Supply Expo, which will be held at the Sands

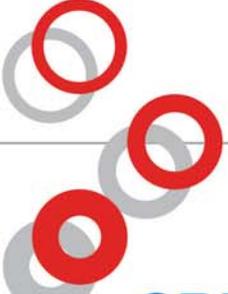
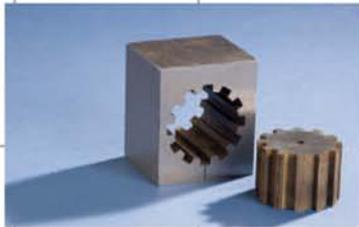
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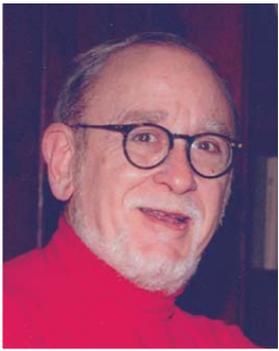
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## Woodruff Imberman

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

## AMERICAN FASTENER MAKERS: WHAT "RESHORING" MEANS TO YOU

If executives of efficient American fastener producers overcome organizational inertia in their mid-management ranks by taking five steps needed to improve their competitiveness, they can meet the price and delivery requirements of fastener buyers and take advantage of the "reshoring" trend – orders once sent to foreign fastener producers, often in Pacific Rim countries – but now returning due to rising Far Eastern labor costs, fluctuating foreign exchange rates, and logistical difficulties.

As the President, CEO, chief marketing officer of a management consulting firm who spends much of his time meeting with clients to discuss how to improve their performance and organizational effectiveness, I know from experience that many fastener executives are their own worst enemies. I have heard innumerable variations on the theme of:

**"We don't need any help! We're tops!"**

**"We're not alone...it's a down economy because of Washington"**

**"We are the best in our industry,"**

**"I can't get my management team excited about a new program"**

**"Business isn't good now, but the whole industry is down etc. etc."**

In short, they act as if they are satisfied with their current profit level, however modest it may be. But as Peter Drucker said,

**"Inertia in management is responsible for more loss of market share, more loss of competitive position, and more loss of business growth than any other factor."<sup>1</sup>**

Inertia has captured them; good enough is good enough. Inertia can best be identified when executives and owners send the message through their organizations by their actions and inaction that good enough is good enough, despite below average results. Everybody knows business is tough these days.<sup>2</sup>

Other fastener industry executives worry because they know their industry is highly fragmented,

and populated with dozens, nay hundreds of relatively small companies, few with more than several hundred employees. They know this fragmentation allows purchasing agents at the Original Equipment Manufacturers (OEM's) considerable ability to play one fastener maker off

against another for better pricing. No, some fastener executives worry about improving productivity and become more competitive. The most successful fastener industry executives I have met have a gnawing sense that if they had only made an extra effort here, had asked their managers to execute faster there, had been less accepting of excuses, and had insisted on better performance rather than resting on dubious laurels of current profitability (often marginal), their firms would have now have lower per-unit costs, a better delivery record, and fewer orders lost to foreign competitors, if...

**"We had not made this mistake..."**

**"I had not waited to start ....until our margins fell out of bed."**

**"If only I had prepared for two of our major customers filing for Chapter 11..."**



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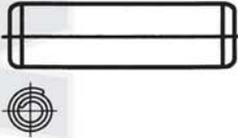


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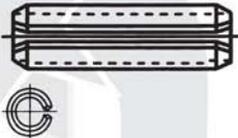
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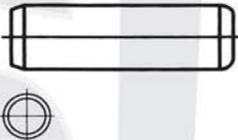
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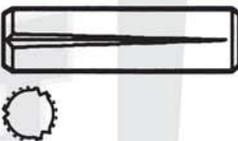
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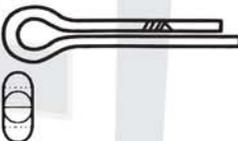
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## DISTRIBUTOR NEWS

### General Inspection, LLC

has acquired the assets of NDT, Inc. of Holly, Michigan.

NDT has specialized in internal diameter inspection. Their products can profile and/or gauge the entire internal geometry of cylindrical parts. This acquisition will immediately strengthen G.I.'s NCTP (non-contact thread probe) product line for inspection and detection of internal threads.

G.I. continues to invest very heavily in R&D for to improve our sorting and gauging capabilities, with a focus on sensors and our proprietary software. We expect to continue to set the world standard for laser, optical and eddy-current sorting and inspection equipment.

General Inspection is now offering the PRO 1000 series and replacement probes for current customers. Look for upgraded versions of NDT's unique products, Gi will advise as these offerings are available.

General Inspection, LLC manufactures a complete line of gauging, sorting, and inspection systems incorporating Laser, eddy current, and vision technologies for dimensional measurement, determining metallurgical defects as a method for achieving zero defects.

Please contact General Inspection for a no charge feasibility study or have their demo van come to you. Toll Free: 1-888-817-6314 or 248-625-0529 in Michigan. Please visit Gi at [www.geninsp.com](http://www.geninsp.com).

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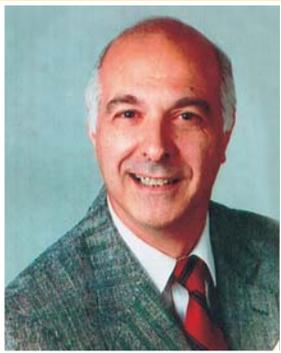
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## Bart Basi

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

## WHAT'S THE DIFFERENCE?

### Introduction

In the recent past, choosing a business entity under which to operate was easy. Either businesses operated as a sole proprietorship, a partnership, and S Corporation or they incorporated as a C Corporation. There were clear advantages and disadvantages to each one. The sole proprietorship and partnership had the advantage of simplicity and lack of formal arrangements. The C Corporation was for national companies, and the S Corporation was for those individuals needing asset protection and a formal entity in which to operate in.

Today the business structure is not a default arrangement. Business people have an alphabet soup of business types to choose from. Though many of the new forms offer limited liability and single layer taxation, the tax and legal differences are not nearly as clear as they used to be in the past. This article will discuss three types of business entities and point out some very subtle and not widely known differences between the chosen entities. All three entities are excellent for any small business person to operate a business.

When deciding which entity to operate under, the business owner must take into consideration legal liability, tax circumstances while operating and dissolution, the person's goals, and the size of the operation among other factors. Tax circumstances are of utmost importance when choosing an entity. However, ease of transferability, legal protection, and other factors are affected under each entity type. The advantages of having a Limited Liability Company (LLC), S Corporation, and C Corporation are discussed below.



### The Limited Liability Company

With an LLC, there are no restrictions on ownership. An S Corporation, on the other hand, does have restrictions on ownership. To hold an S Corporation status, one must be a resident and citizen of this country. No more than 100 people are allowed to own stock. If the ownership requirements are violated, the company loses its S Corporation status and it can not attain S Corporation status for a number of years.

With an LLC, these restrictions do not exist and its status is not jeopardized. While most LLCs will maintain membership of well under 100 members, the option or ability to expand the number of investors rapidly does exist. Many immigrants just starting business can benefit

from this form of business as well without suffering from double taxation.

There are fewer formalities in maintaining an LLC. This is a major convenience and aides in limiting liability. The types of businesses identified here are all subject to being disregarded as an entity if the owner does not obey formalities. This is what is known as "veil piercing" and it happens when company owners do not observe formalities in paperwork, meetings, and otherwise use the business as an "alter ego".

While the owner of the business can not use the company as an alter ego to defraud people out of money, the LLC does not require the formalities that corporations do. Hence the LLC can be a better insulator against liability if maintenance of meetings and documents is going to be an issue.

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### North East Fastener Corporation

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## CELEBRATING 50 YEARS OF FASTENER MANUFACTURING

When Robert J. Webster founded North East Fasteners 50 years ago, the New England area was the major force in the fastener industry. Today, this Connecticut company is one less than a half-dozen fastener manufacturers in the region.

In 1963 the nearby town of Waterbury, CT, was the cold heading capital of the world. In large part this was due to the Scovill Manufacturing Company, which was manufacturing millions of brass clothing rivets for blue jeans and other products.

Scovill trained hundreds of header operators who would add to or start-up their own cold heading manufacturing companies.

The region's many fastener manufacturers are why the Waterbury and Hartford Fastener machinery companies originated in nearby Connecticut towns.

But in the decades that followed fastener production moved - first to Rockford, IL, then Japan, followed by Taiwan and China.

"Globalization and difficult economic conditions drove many of the once thriving New England plants producing fasteners into diversification, downsizing and then, often, right into extinction," current NEF CEO Eric Webster explained. "Now, less than six fastener manufacturers remain."

NEF survived by being "fairly crafty, hyper efficient and most importantly by controlling the overhead in order to avoid being overly exposed during the more difficult downturns," Webster told FIN. "We were just small enough and had such a specialized niche that we were able to survive the initial blasts of the new 'global paradigm'."

NEF can produce a 70-pound box of -00- screws totaling nearly one million parts.

"These are very small screws," Webster says as he points to the several thousand screws in his hand. "If NEF can make these very tiny screws to the highest standards, it can easily make any size screw to the exact standards."

NEF now produces a size range up to number 10 diameter and up to 2 inches in length as well as the Metric equivalent.

Webster credited NEF's focus on efficiency from the point of quotation through shipment for the company making it while nearby companies disappeared.

Even machinery is packed efficiently into a relatively small plant. There are over 80 high-speed production machines into the SQ FT facility.

"We can and do rebuild nearly all of our equipment in-house and on a regular basis," Webster added.

NEF's employees average over 18 years of fastener experience and total well over 2.8 million hours of manufacturing screws. "Our employees are empowered and encouraged to improve the quality of the systems affecting their work," Webster told FIN.

NEF has computerized every aspect of sales, quotations, quality, production and testing procedures.

"In over a 15-year period NEF has continuously built its own state of the art software programs," Webster explained. "Starting with the first potential customer inquiry, the system tracks and alerts the NEF employee to any and all of the customers unique fastener requirements, which allows for a sophisticated and exacting quote to be e-mailed within seconds."



NEF Founder, Robert J. Webster



# 1963 2013



**WHEN OUR COMPANY WAS FOUNDED IN AUGUST 1963,** Beatlemania was just getting started, a first-class stamp cost a nickel, and rotary telephones were being replaced by fancy push button models.

So much has happened since then. And we've grown and innovated to stay on the leading edge of new manufacturing technologies and changing customer needs.

But one thing hasn't changed — our commitment to excellence.

For 50 years we've known that a product's integrity depends on the design, quality and reliability of the parts that go into it. That's why we put so much thought into the way we manufacture all our products. And that's why our customers keep coming back year after year.

At this important milestone in our history, NEF would like to say a special thanks to all our loyal customers. *Without you, we wouldn't have a history to celebrate.*

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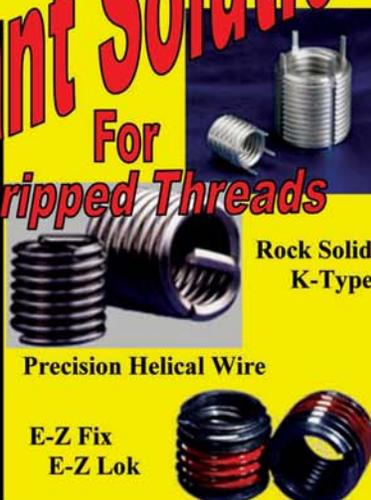
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**DISTRIBUTOR NEWS**

**UNICORP Electronic Hardware** is proud to announce that we will be expanding our cable tie line to add new sizes and styles. We will also be offering our electronic hardware, fasteners, and handles in National Aerospace Standards (NAS).

Our expanded cable tie line and NAS products will be available on our newly upgraded website by the end of 2013. Since 1971, Unicorp has been a socially and environmentally responsible leading manufacturer of American standard and metric precision electronic hardware, fasteners and handles. We pride ourselves on our dedication to customer satisfaction and our commitment to support the needs of our distributors. Unicorp offers top quality products, fast delivery, excellent pricing, technical assistance, and manufacturer to customer print specifications. We are known throughout the industry as the "oddball king" because we offer the widest variety of diameters, lengths, and finishes in our numerous product lines.

Unicorp Electronic Hardware is used by leading companies in nearly every industry including electronics, communications, aerospace, military, medical, computer, automotive, energy, robotics, marine, PCB mounting & circuit board assembly, security, industrial equipment, entertainment and many more.

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### LNA Solutions, Inc.

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## BOXBOLT® EARNS ICC ES CERTIFICATION

LNA Solutions, Inc., announces that its BoxBolt® is the first blind fastener to receive an International Code Council (ICC) Evaluation Service Report for use as ICC ES ESR-3217.

ICC is an accrediting association dedicated to developing model codes and standards. The company will exhibit BoxBolt and its complete line of BeamClamp steel-to-steel fasteners at Booth #1848 during the National Industrial Fastener & Mill Supply Expo, October 24-25, 2013 in Las Vegas.

BoxBolt provides a safe, secure means of connecting rectangular, circular, or square hollow tube steel for cladding, curtain walls, blast walls, cell tower, reinforcement, and in other applications where access to the tube is limited to the opposite side of the connection, according to LNA Solutions. No on-site drilling or welding is required, and installation is fast and easy using basic hand tools. BoxBolt connections offer a guaranteed safe load and provide aesthetic detail plus a corrosion-resistant finish. It is available in diameters of 1/2-inch, 5/8-

inch, and 3/4-inch, each with three different lengths.

The method of using "blind-bolt type" fasteners has been recognized since 1996 in the AISC Steel Construction Manual (Section 7-13) as an alternative to welding; however, it was not a certified solution by an accrediting agency.

"Our customers have been asking for us to acquire such approval, with the need to have an ICC Evaluation Report being the most common request," according to Terry Doran, Vice President of Sales for LNA Solutions.

"Since no other blind fastener had ever undergone the evaluation process, ICC required that we develop an Acceptance Criteria (AC) for BoxBolt," Doran said.

"We then began working with Ronald Hamburger, Senior Principal at Simpson, Gumpertz & Heger to develop what is now known as AC437. This was approved by ICC ES for testing." BoxBolt is the only blind fastener that has an ESR from the ICC ES. Ⓞ



## The #1 Reason Your Customers Will Buy BoxBolt



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### It is the first and only blind bolt to achieve ICC ES certification



Your engineering and construction customers know the importance of building code and safety compliance. They will appreciate the peace of mind you will give them with our new ICC ES ESR 3217 certification.

Designed for hard-to-access steel tube connections, Box Bolt is ideal for cladding, curtain walls, blast walls, and cell tower reinforcement. It is suitable for HSS rectangular, circular, or square tube and available in three diameters, each with three different lengths.

### Reasons #2 through #6

- Access to one side of the connection is all that is needed
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For over a quarter of a century, Great Lakes Parts has been a leading supplier of wheel nuts and wheel bolts to distributors and OEMs all over the world. With an "in-house" inventory of hundreds of styles and configurations of wheel nuts and studs for heavy duty trucks, passenger cars, earth-moving equipment, agricultural equipment, and military vehicles, Great

Lakes Parts (GLP) has become a valuable supplier and business partner to most full-line fastener companies.

Great Lakes Parts has expanded their offerings to include other types of "special manufactured fasteners". Although GLP has 'specialized' in wheel attaching parts up to this point, we also have the ability to produce and supply almost any configuration of threaded steel fasteners. So send us inquiries on any types of 'special' bolts or nuts.

Haltec Corporation is recognized worldwide as the leading manufacturer of specialty tire valve systems and pressure inflation hardware. Haltec's 45,000 square foot facility in Salem, Ohio maintains its corporate headquarters, manufacturing, design, engineering and distribution services. As an ISO 9001/2008, with design certified company, Haltec Corporation's Quality Policy is to lead the tire valve industry by meeting or exceeding industry standards and customer requirements at a competitive price. Our on-site engineering and custom design department is complemented with a state-of-the-art machine shop and soldering, fabrication, custom-bending and product assembly services, all prepared to produce products to meet your inflation and pressure maintenance needs. Haltec has refined a global network of distribution channels and continues to grow sales to its target markets.

Haltec Corporation's products and services are designed to provide safe, efficient, and accurate tire inflation. Our goal is to provide the tire industry with the equipment and training required to enhance any organization's "Tire Management Program." Whether using air or nitrogen, the tire's PSI and tread depth need to be accurate, and the method of inflation must be safe, simple and fast. 

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## NATIONAL INDUSTRIAL FASTENER &amp; MILL SUPPLY EXPO

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Excitement is building for the National Industrial Fastener & Mill Supply Expo set for October 23-25, 2013 at the Sands Expo & Convention Center, Las Vegas, Nevada USA; it was reported today by Expo Management.

"We have already sold 768 booths to 583 companies and continue to receive new contracts and inquiries daily. Exhibit space sales are running well ahead of the same period last year and we expect the Expo to be close to 800 booths (80,000 net sq. ft.)", says Susan A. Hurley, CEM, General Manager. "We are especially pleased that 90 of these companies are either new to the Expo or returning after an absence of at least three years. The Expo will continue to have a major domestic and international presence with exhibiting companies from throughout the U.S. and 17 other countries around the world including Belgium, Brazil, Canada, China, Denmark, Germany, Hong Kong, India, Italy, Japan, Mexico, Netherlands, Spain, Taiwan, Turkey, United Kingdom and Vietnam", adds Ms. Hurley.

In addition to the broad array of industrial fasteners, fastener production machinery and tooling, inspection, testing and packaging machinery, hand and power tools, plant & safety supplies, wire, software systems and other industry products and services on display at "North America's Largest Fastener Expo", the 3-day event also features an entertaining and informative line-up of educational meetings, programs, training and social events.

**Wednesday, October 23 - Education, Training, Meetings – Expo NOT Open**

**7:30 AM – 4:30 PM** – Registration Open in Hall A Foyer at Sands Expo & Convention Center

**8:30 AM – 4:30 PM** – Fastening Technology Workshop

presented by the Fastener Training Institute. Instructor: Bengt Blendulf, President and Principal Lecturer, EduPro US, Inc. Invest in your professional development, Using Bengt Blendulf's fastening technology manual (included with registration), this seminar will be a fact and fun-filled day with one of the most experienced and dynamic fastener instructors in the U.S. and Europe.

**Registration Fee:**

**Fastener Association Members \$299 before September 1st/\$399 after September 1st.**

**Non-members \$399 before September 1st/\$499 after September 1st.**



*Exhibitors at the 2012 NIFMSE  
North East Fasteners [top], Sherex [middle]  
and USA Fastener Group [bottom]*

**9:00 AM – 3:00 PM** – Industrial Fastener & Mill Supply Industry CFO, Controllers, Credit & Accounting Managers Meeting. Presented by the National Fastener Industry Financial Manager Network together with the Business Credit Management Association. Financial managers and staff are encouraged to attend this free meeting. Managing and maximizing cash flow, financial implications of sales agreements, customer contracts and assessing

sales risk while extending open account credit to customers, has become very challenging. To register and/or for more information contact Darryl Rowinski, President of BCMA at (262) 827-2880 or email [darrylr@wccacreditor.org](mailto:darrylr@wccacreditor.org). **FREE to all 2013 Expo registrants wearing their badge.**

*Continued on page 172*

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## DISTRIBUTOR NEWS

To stay proactive towards market demands and satisfy customers' ever-growing needs, **Vogelsang** has added new stock coiled pins and customer service features to their popular same-day shipment program, QuickShip.

Coiled pins in sizes ranging from .062 to 3/8, and medium duty coiled pins in carbon steel are now available for same-day shipment. Vogelsang has also expanded their manufacturing capabilities to 3/4 of an inch, and will soon be adding heavy duty coiled pins to the QuickShip line-up.

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## GLOBAL PRESENCE, TECHNICAL EXCELLENCE WITH QUALITY FOCUS

Fontana Fasteners Inc. (LE) (formally Lake Erie Screw/ Lake Erie Products/LEP Special Fasteners) is part of the Fontana Group of Companies, extending their vision of Global Presence, Technical Excellence and Quality Focus.

Very much like Lake Erie Screw, the Fontana Group has over 65 years of history and fastener manufacturing experience. Back in the 1940's: The Wasmer Family opens Lake Erie Screw in Lakewood, OH while at the same time the Fontana Family opened Fontana Fasteners near Milan Italy. Each company had the same goal "to manufacture the highest quality cold formed cap screws."

Over the next 5 decades Lake Erie Screw builds additional capacity in Frankfort, Indiana, while the Fontana Group acquires and opens 13 factories in Europe and distribution points globally including Fontana USA in Chicago IL.

2007: The Fontana Group purchases Lake Erie Products (Lake Erie Screw) and renames the company to LEP Special Fasteners and begins to rebuild the once great company with a renewed focus for both standard and special products.

2011: The Fontana Group renews its commitment to Lake Erie by investing in new equipment, processes and people along with rolling out The Fontana Production system (Equivalent to the world class manufacturing [WCM]) to achieve **GLOBAL BEST IN CLASS PRACTICES FOR OPTIMAL QUALITY AND EFFICIENCY.**

July 1, 2013: LEP Special Fasteners is renamed Fontana Fasteners, Inc (LE) further developing the unity of the Fontana Group of fastener manufacturers worldwide.

Today Fontana Fasteners Inc. manufactures locally in

Frankfort, Indiana, a quality line of (LE) fasteners that includes hex head cap screws Grades 5, 8 and 9, metric classes 8.8, 10.9 and 12.9; A325 and A490 structural bolts, as well as flange bolts, track bolts, plow bolts, sems, MATHread, knurled shoulder bolts, Hex TC bolts, wheel bolts and custom cold-formed specials per print.

Sizes range from diameters of M6 to M30, (1/4 thru 1 1/4) and lengths from M12 to M300 (1/2 thru 11 1/2) varying by diameter. Raw material is produced from steel melted and rolled in the USA. Steel types include: low carbon steel, carbon steel, alloy steel and boron steel. Standard in-house coatings include zinc phosphate & oil and RoHS2 zinc with clear, yellow and blue with an inline bake oven.

Fontana Fasteners Inc. also has three state of the art atmospherically controlled in house heat treat furnaces. In addition Fontana Fasteners Inc. aids customers with design applications, APQP processes, PPAP's, with in house laboratories accredited by A2LA, and is certified to ISO 9001:2008 and TS 16949:2009.

Still owned and operated by the Fontana family, today The Fontana Group has a workforce of over 2,500 employees at 17 production sites globally, with a commercial presence in 53 countries worldwide. The Fontana Group is one of the most advanced fastener manufacturers in the world,

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## Lorri Hunt

Lorri Hunt is the president of Lorri Hunt and Associates, and has 14 years experience in implementing quality management systems in diverse businesses such as Honeywell, the Department of Energy, and small businesses. She is an active member of the U.S. Technical Advisory Group to ISO Technical Committee 176. She serves as the chair for the United States group responsible for developing consensus positions related to ISO 9001 and 9004. She also served as the international Deputy Task Group Leader to the amendment to ISO 9001:2008.

Lorri is a frequent contributor to quality publications and journals and is a co-author to the *Insiders' Guide to ISO 9001:2008*. She is also a frequent conference speaker.

## ISO 9001 REVISION REACHES COMMITTEE DRAFT LEVEL

**Author's Note:** ISO 9001 is still in the revision process. Information in this article should not be used by organizations to make changes to its quality management system or for legal agreements. Information in this article will be useful in helping organizations understand the level of change that is coming.

The revision to ISO 9001 was recently published as a Committee Draft (CD). While there is still a long way to go in the process, keeping current on what is going on with the ISO standard that has over one million users is important to organizations that use ISO 9001 as the foundation to their quality management system.

The biggest change to users is the structure. Both the 1987 and 1994 versions of ISO 9001 used a "20-element" model that had familiarity to manufacturing industries. In the year 2000, ISO 9001 transitioned to a process approach and moved from the "20-element" model to a structure of five clauses. This structure was used for both the 2000 and 2008 versions of the standard.

The ISO Technical Management Board has adopted a standardized format and common core text for use in all new and revised ISO management system standards,

to promote greater ease of use for organizations that seek to integrate the requirements of (for example) ISO 9001, ISO 14001, ISO 50001 into a single, coherent system. This standardized format is referred to as Annex SL. Table I compares the clause titles of ISO 9001:2008 to the clause titles in the proposed version of ISO 9001.

While there is not an ISO 9001 requirement for an organization to develop its quality management system and document architecture using the structure of ISO 9001, many organizations choose to do so because it is easier to understand and maintain compliance as well as demonstrate compliance to external parties. As a result, many organizations structured their quality management systems around the ISO 9001:2008 structure.

Organizations that see the structure change might be overwhelmed. Before making any quality management system structure changes, it is important to consider the opportunities and issues associated with making such a change. Any change should add value. Making a change for the sake of lining up a quality management system to a structure of any kind adds unneeded cost and overhead to the organization.



Annex SL	ISO 9001:2008
4 Context of Organization	4 Quality Management System
5 Leadership Planning	5 Management Responsibility
6 Planning	6 Resource Management
7 Support	7 Product Realization
8 Operation	8 Measurement, Analysis, Improvement
9 Performance & Evaluation	
10 Improvement	

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## INDUSTRIAL RIVET CONTINUES THEIR GLOBAL EXPANSION

Industrial Rivet & Fastener Co. is continuing to increase its global footprint with new warehouses in Asia, Europe and North America. The goal is to bring inventory closer to its customer base in order to shorten delivery times and facilitate a healthy supply chain for distributors and their customers.

Founded in 1912, Industrial Rivet & Fastener Co. is a fourth-generation global manufacturer and distributor of innovative riveting systems and fasteners. This company serves many industries including: automotive, aerospace, construction, computer systems and many others. RivetKing™ has a distribution network of 11 U.S. locations and ten international distribution centers.

Industrial Rivet has built its strong reputation for innovative blind riveting technology under the RivetKing™ brand and offers customers a wide range of rivets, riveting delivery systems and fasteners. "Over the last several years we've opened warehouses in Germany, Canada and Mexico – in addition to our growing U.S. presence," explains Joanne Sherman, a third-generation owner of the company. "We're also increasing warehouses in Asia and we've found that by putting inventory and people in countries and regions where they weren't before – we are able to significantly help our distributors and their customers speed time to market."

Aside from getting product into the hands of customers faster, the strategically located warehouses can also help to reduce costs since shipments travel shorter distances. For example, RivetKing Germany, which is located in near

Nuremberg, provides manufacturing and distribution services to businesses throughout central Europe. This simplifies shipping processes, especially for those located in the Eurozone.

With both new and existing sales and distribution facilities, RivetKing now has direct access to many markets around the world. Technical specialists, a well-trained sales staff and a warehouse in key strategic locations will enable RivetKing to supply global clients with a high level of customer service and a full array of blind rivets and rivet delivery systems.

The enhanced accessibility of products and exemplary customer service has brought positive feedback from customers. "What we're finding from distributors in particular is that they view RivetKing as much more a partner than supplier," says Ms. Sherman. "In fact a few distributors in Australia and the U.S. have actually incorporated

our product into their own marketing efforts." This increased exposure combined with an improving economy has resulted in a lift in sales as RivetKing is deepens market penetration by establishing new relationships with businesses and distributors in each territory.

Establishing a global distribution model has long been a strategy for RivetKing. According to Ms. Sherman, "We're considering new markets all the time and will continue to analyze where our products are most needed so we can meet the needs of our customers faster." This is a differentiator for the company since many of competitors have only one or two large warehouses, and can only offer delivery times that are weeks out. 



*Tina Kahl with RivetKing Germany Manager Bill Holler*



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When quality is demanded and reliability is expected within an extremely price efficient framework, look no further than Continental-Aero for all your nut and fastener needs. Since 1948, **Continental-Aero** has been famous for and stocks one of the largest locknut inventories with its branded Royal Purple Color Tork-Tok nylon insert, all-metal locknuts, grade 5 & grade 8 finished hex Nuts, and 2H heavy hex nuts A194. Continental-Aero is the premier stocking master distributor of these products in the North American market. With warehouses in Alsip, IL; Harrison, NJ; Mississauga, ON, Canada; Iola, KS, Chino, CA and sales office in Buffalo Grove, IL. Speedy market response time, targeted delivery for high priority parts, and filling the need for crucial applications is as easy as picking up the phone or sending an email.

Continental-Aero will be rolling out the newest edition of our coveted and highly collectible toy truck. In our trademarked Royal Purple company color, the new model is part of a short run of our popular toy trucks that were first introduced in 1987. The debut of this season's truck will be at the National Industrial Fastener & Mill Supply Expo in Las Vegas, Nevada, on October 24, 2013. Please visit our Booth number 309 to pick up your free limited edition truck while supplies last. Don't forget to check out the latest additions to our catalog of commercial & industrial nuts while you're there!

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## QUALITY, DELIVERY, SERVICE - BEACON HAS YOUR BACK!

What comes to mind when you hear Beacon Fasteners and Components? Is it Beacon's quality-driven philosophy and rigorous testing of parts? Maybe it is Beacon's employees and the seamless way in which they do business with you? Or perhaps it is Beacon's wacky and humorous marketing campaigns (for example see page 55). Hopefully it is all the above but as you continue to read you will learn something new and then be asking yourself, "Why aren't I buying more from these guys?"

Founded in 1979 by Bob Wegner and Gary Pavlik Beacon is the leading supplier of quality driven high performance screws focusing on SEMS, Thread Forming Screws, Thread Cutting Screws, High-Low Tapping Screws, Sheet Metal Tapping Screws, Machine Screws and per Print Specials.

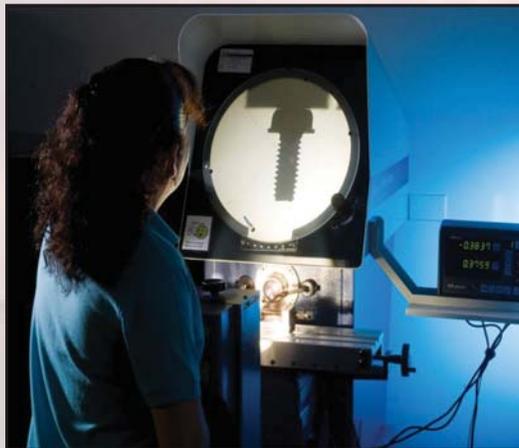
### Quality, Quality, Quality

Beacon takes pride in staying on the cutting edge of quality through product validation, knowledge of industry standards and trends in the marketplace. Like other suppliers in the industry, Beacon performs dimensional inspections on every lot. However, what sets Beacon apart is their additional testing requirements focusing on product performance of every case hardened lot designed for metal applications. So what exactly does this mean? It means protection for their customers by ensuring that every part's design actually works how it is supposed to.

The four specific testing requirements performed at Beacon for these case hardened fasteners are: **The Drive Test** where Beacon validates that the screw's material

hardness is capable of making its own mating thread without excess torque. **The Torsional Strength Test** validates the material hardness is capable of maintaining the minimum strength requirements. **The Ductility Test** validates the screw's toughness and flexibility to accommodate any seating surface variations. And lastly, **the Hydrogen Embrittlement Test** which is a 24 hour test that measures the risk of a fastener failing suddenly without warning.

All of Beacon's catalog parts are environmentally accepted by being RoHS, Reach and WEEE compliant. In addition, Beacon can provide support documents traceable to their supplier's material, heat treatment and plating process. All performance testing results, inspection reports and factory certifications for material and plating are available at your request **FREE OF CHARGE!**



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Meeting customer's special plating requirements is also standard procedure at Beacon. Whether you need a certain finish, plating thickness or salt spray requirement Beacon can ship parts complete to you. Again, being on the cutting edge of quality, lots are tested for compliance to the ASME standards plus Beacon's policy is to always double bake after stripping and replating to help reduce Hydrogen Embrittlement concerns. Beacon will help save you time and money when you rely on them for your replating needs so you can be more efficient.

*Continued on page 209*

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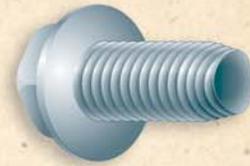


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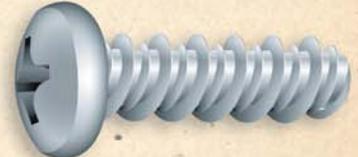
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## Joe Dysart

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.

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## ARTICLES KING: FEATURE ARTICLES NOW A TOP DIGITAL MARKETING TOOL FOR FASTENER DISTRIBUTORS

Three new studies have unearthed a startling new trend in online marketing: the traditional feature article, used for centuries to market brands in conventional media, is now the 'go-to' digital marketing tool for fastener distributors.

Driving the trend are changes Google has made to its search engine during the past few years. Essentially, the revamp rewards Web sites that post interesting, quality content – and heavily penalizes sites that cough up keyword-stuffed yawn-fests, which only a search robot could love.

"Before, content wasn't the big push," says Tyson Stevens, a SEO manager at PMA Media Group ([www.pmamediagroup.com](http://www.pmamediagroup.com)) and a contributor to the 2013 State of Content study, released by CopyPress ([www.copypress.com](http://www.copypress.com)). "The goal was to put out mediocre content as quickly as possible, targeting as many keywords as possible and pushing links to that content to increase search engine rankings."

But "content marketing is no longer about the quick, cheap hit," Stevens says. "It must be quality."

Evidence of the trend popped up most dramatically in a study, "Quarterly Intelligence Briefing: Digital Trends for 2013," released by Econsultancy and Adobe. The

research found that 39% of marketers surveyed now say that content – including articles, video and white papers – is their top tool for digital marketing.



*Above: Joe Pulizzi, executive director, Content Marketing Institute, is a big believer in the marketing power of the quality feature article.*

*Below: "Nothing works well in a silo," says Arnie Kueen, president, Vertical Measures. "A good content marketing plan includes many aspects, starting with a strategy and incorporating research, development, optimization, promotion and measurement."*



feature articles yield the best return on investment across all industries. Close behind in popularity were videos, followed by whitepapers.

Similar research – "The Spending Study: A Look at How Corporate American Invests in Branded Content for 2012," released by the Custom Content Council ([www.customcontentcouncil.com](http://www.customcontentcouncil.com)) – found that nearly 75% of the 177 respondents are creating content for print, and then re-purposing that content on their company Web site and throughout social media.

Plus, the study found that 79% of marketers surveyed said they are refocusing their marketing efforts on branding with content at a "moderate or aggressive pace."

"The stability of brand content spend in the face of overall marketing budget decline proves the staying power and efficacy of content marketing," said Lori Rosen, Executive Director, Custom Content Council. "This notable growth outcome is motivating brands to outsource" content creation at record levels.

Moreover, CopyPress' survey revealed that 62% of marketers said

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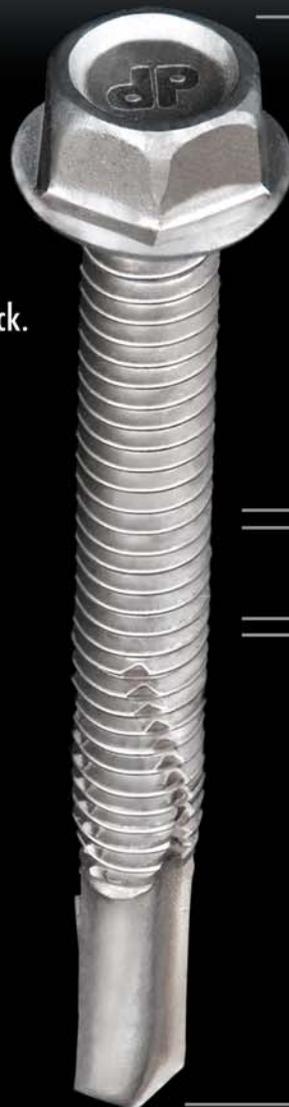
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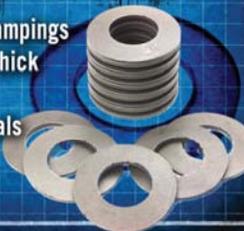
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All American Washer Werks looks forward to servicing our existing customers' "Bagging" needs as well adding and cultivating new business relationships.

All American Washer Werks is also proud to welcome Frank Flynn and Phil Wennerstrom to our staff. They are working in our tool room and are excited to be on board.

For more information on products and services, contact All American Washer Werks at 912 High Street, Mundelein, IL 60060. Tel: 847-566-9091, email: sales@washerwerks.com or visit their website at www.washerwerks.com.

## DISTRIBUTOR NEWS

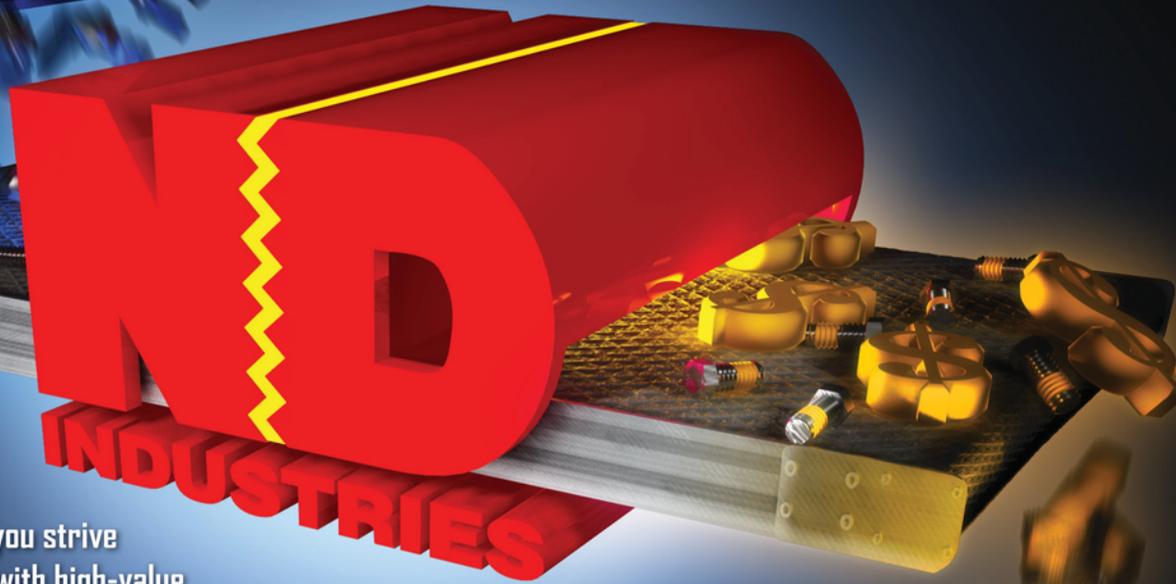
The **Würth Group** has appointed Marc Strandquist as Executive Vice President of the Würth Industry of North America (WINA) companies. The appointment comes as part of the reorganization of the Würth Group's management structure.

As Executive V.P. of the WINA, Mr. Strandquist will be responsible for the six industry companies in North America: Würth Action (Riviera Beach, Fla.), Würth Adams (Maple Grove, Minn.), Würth Revcar (Roanoke, Va.), Würth Service Supply (Indianapolis, Ind.), Würth Snider (Louisville, Ky.), and Marine Fasteners (Sanford, Fla.).

The companies work as a collective unit to bring inventory management solutions to original equipment manufacturers (OEMs) through their proprietary service brand, CPS<sup>®</sup> C-Parts Solutions.

For more information on the Würth Group, visit their website at www.wurthindustry.com.

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## Jim Truesdell

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

## WATCH OUT - STANDARD FORMS ARE GETTING MORE ONE-SIDED!

Better start reading that fine print! For well over a generation the standard form contracts we are signing as a matter of course have been getting longer and more complex. Consumers have become accustomed to "clicking" that they agree with the terms of sale so that they can proceed on to information they are seeking on the web.

Business people short on time are relying on the verbal assurances of a sales rep that everything in the small print of the standard form is fair and OK so that they can enter into a purchase of goods or services and then get on with their daily tasks. The problem is, however, that in our fear of litigation or our desire to cover our rears we are ceding more and more of our business decisions to a distant group of attorneys who are establishing the terms of dealing between us and our customers.

In particular I have recently seen companies present commercial and industrial purchasers with contracts that bind not only the company but the individual signing the contract to its terms. While a clearly marked "personal guarantee" might be proper and justified if one is dealing with an owner/ manager or proprietor of a small "mom and pop" corporation, where is the logic or fairness in asking an EMPLOYEE of a company to bind himself or herself personally and individually to the obligations? Unless this is noticed and objected to by the signer, that individual might some day find himself or herself on the hook personally for large corporate contracts where the employer company goes bankrupt or out of existence. If this practice continues to spread and buyers don't take notice and refuse to sign such agreements it could well have a chilling effect on our system of commerce as corporate employees wise up and

start balking at signing these agreements.

I have run into these "individual" obligation arrangements in the fine print recently in such agreements as telephone directory advertising, garbage service, and purchase of office equipment. Sometimes my refusal to sign has been met with the sales reps' statement that they do not have the authority to deviate from the standard terms, or their assertion that "that will never happen".



Many fastener (and other commodity line) distributors are large enough that much of our contract signing is done by employees rather than owners. These employees may well, and rightfully, object to putting their personal credit on the line.

Another provision being included more frequently is "automatic renewals" of services that take effect unless the customer gives written notice of cancellation well in

advance. Sometimes these even allow for rate increases unless the specific notice in advance is given.

A commercial customer needs to proceed even more carefully than a retail consumer in these instances because a court is less likely to find a business purchaser to be an unsophisticated target of these one-sided contracts and thus find reason to strike down harsh and unconscionable language or provisions in the contract language. On the idea that our economy and capitalist system is based on freedom of contract and the idea of mutual commitment and assent, even a consumer has a duty to read the terms under which he or she will be bound. A small business buyer may well be expected to have the skills or the legal resources (as well as the bargaining power) to stand their ground in the face of standard forms.

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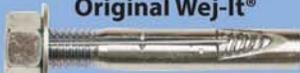
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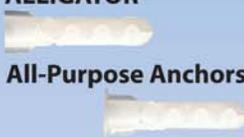
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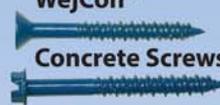

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### Porteous Fastener Company

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## PFC IS SERIOUS ABOUT SOCKETS AND METRICS!

### Sockets- approaching 11,000 sku's!

Porteous Fastener Company, a leading master distributor of construction and industrial fasteners, is now a major player in the socket market. For years, PFC has carried a decent socket inventory of A items, but

with the major expansion last year the company now has a serious socket inventory of A, B, C and D items. Two years ago the number of socket SKU's available was 2,865.

That number is now approaching 11,000! The largest growth is seen in categories such as shoulder bolts, dowel pins, set screws, metric, plated and patched sockets but the entire line is worth taking a look at. All of the plain sockets are RoHS compliant, as well as the zinc parts, which have been baked to relieve hydrogen embrittlement. All inch sockets in stock are made from high strength alloy steel, which exceeds the physical requirements of grade 8. The metric sockets are all made to class 12.9. PFC socket products can be found throughout their distribution network in both fine and coarse thread, and are packaged in both bulk cartons and smaller boxed quantities.



### Metrics- major expansion!

Back in 1996, PFC dove into the world of metric fasteners- stocking a small line of cap screws, nuts and washers. As the years went on, more categories and sizes were added as the industry demanded. Earlier this

year, PFC surveyed distributors with a need for metric fasteners. The result of that survey: a major product line expansion! Now in stock, separate categories of DIN 931 and DIN 933 hex products in both 8.8 and 10.9 that 83% of survey takers required. The initial orders of those hex heads were in excess of 1,000,000 pounds! The 10.9 cap screws are available in zinc clear, zinc yellow and plain; the 8.8's in

zinc clear and plain. Both have healthy bulk and packaged inventories. Also added was a larger breadth of nuts and washers, which include new categories such as Class 6 Nylon Insert Locknuts and Star Nuts, Class 10 All Metal



Locknuts and Class 8 Thick Nylon Insert Locknuts. Hi Collar Lock Washers, Hardened Flat Washers and Fender Washers have been added to the metric washer category. Part of the metric expansion also included sockets, with more sizes and more inventory in stock than ever before. ●

# PFC is Serious About Sockets...

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Inch and Metric



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## DISTRIBUTOR NEWS

**Porteous Fastener Company, (PFC)**, would like to recognize the following four individuals for their outstanding contribution to the company:

Carrie Haggerty in Denver, Colorado was recently promoted to Branch Manager of that location. Carrie has been in the industry since 1996 and with PFC since 2006 where she has proven herself as a competent leader.

Dick Kleppe, a 35 year industry veteran, started his fastener career with RB&W. After 24 years with PFC, he has been promoted to Vice President of Materials. In addition to overseeing inventory control and packaging, Dick will also oversee Quality Assurance.

Bill Flynn, with PFC since 2004 was promoted to Vice President of Procurement and will oversee operations in Taiwan. Bill is a long time industry veteran of 40 years, and had worked previously at HTI, Reynolds Fasteners and PM Fasteners.

Dick McDaniel has been promoted to the position of Southwest Regional Manager, which assumes responsibility of PFC's Dallas and Houston locations. Dick has also recently been elected to the Board of Directors for the Southwest Fastener Association. Dick has been with Porteous for 29 years and in the industry since the late 70s.

"We feel these promotions will improve communication within the company and help us accomplish our continued goal of First Class Service," said Bob Porteous, EVP/COO. "We are excited to give them the opportunity to grow with the company, and we are confident they will all do an outstanding job!"

Founded in 1966, Porteous Fastener Company is an importer/master distributor of construction and industrial fasteners, selling only to distributors. The company operates 14 locations - 13 in the U.S. and one in Canada.

For more information about Porteous Fastener Company, email: [info@porteousfastener.com](mailto:info@porteousfastener.com) or visit them on the internet at [www.porteousfastener.com](http://www.porteousfastener.com).

## DISTRIBUTOR NEWS

Even while **Cardinal Fastener** is in the midst of celebrating its 30th birthday, the company is busy reinventing itself to better serve industrial fastener distributors, now and in the future.

Fastener Distributors who visit Cardinal Fastener at NIFMSE booth #1212 in Las Vegas will not only join in Cardinal's 30th anniversary celebration, they will also get reintroduced to a dynamic new company that delivers superior quality fasteners quickly and inexpensively.

As a special promotion, new and existing customers can experience the "New" Cardinal Fastener with a special 15% discount on new part orders placed before Nov. 15, 2013.

For complete details of products, contact inside sales at 1-800-237-3477 or email [sales@cardinalfastener.com](mailto:sales@cardinalfastener.com). Visit us online at [www.cardinalfastener.com](http://www.cardinalfastener.com).

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Stemming directly from the disc spring are our Original SCHNORR Serrated (Ribbed) Safety Washers. What makes our Original SCHNORR Serrated Safety Washer perfect for bolted connections? They offer the highest level of security through friction on the both sides of the washer. Since they are actually springs, SCHNORR Safety Washers also maintain preload over a variety of environments that would otherwise cause loss of proper bolt

torque: vibrations, thermal cycling, dissimilar materials, uneven surfaces, etc. These serrated washers have diameters that coordinate to cap screw dimensions in metric or inch, matching practically any screw and bolt type.

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

The High Load Safety Washers or HS series are used when the space available is insufficient for standardized load washers.

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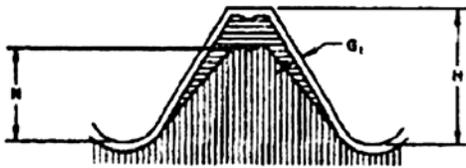
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## ASTM A193 B7, A194, 2H AND OTHER BOLTING STANDARDS NOW REQUIRE DECARBURIZATION INSPECTION

by Joe Greenslade Director of Engineering Technology, IFI

Decarburization is the loss of carbon from the surface of steel and alloy heat treated threaded fasteners. This is the result of improper controls in the hardening furnace used to harden fasteners. When a bolt or nut is decarburized the threads have less strength than the fastener's core. Excessive decarburization can cause the threads to strip off the bolts before they meet their required tensile strength or strip out of nuts before they reach their required proof load.



-  - GROSS DECARBURIZATION (Sometimes called complete decarburization)
-  - PARTIAL DECARBURIZATION
-  - BASE METAL

A standard hardness test is taken in the core of fasteners and decarburization is not detected. If the threads strip off bolts or out of nuts during tensile and/or proof load testing, decarb should be suspected, but its presence can only be determined by testing as described below.

The ASTM A01 Committee has decided that decarburization is a serious enough problem that all heat treated grades of fasteners shall be tested for decarburization.

The ASTM Technical Committee A01 on Steel, Stainless Steel and Related Alloys governs the following popular bolting material standards:

- A193/A193M Alloy-Steel and Stainless Steel Bolting Materials for High-Temperature Service
- A194/A194M Carbon and Alloy Steel Nuts for Bolts

for High Pressure and High-Temperature Service

- A320/A320M Alloy Steel Bolting Materials for Low-Temperature Service
- A437/A437M Alloy-Steel Turbine-Type Bolting Material Specially Heat Treated for High-Temperature Service
- A453/A453M High-Temperature Bolting Materials With Expansion Coefficients Comparable to Austenitic Stainless Steels

- A540/A540M Alloy Steel Bolting Materials for Special Applications
- A1014/A1014M Precipitation-Hardening Bolting Material (UNS N07718) for High Temperature Service

A few years ago the ASTM A01 committee created ASTM A962/A962M, the Standard Specification for Common Requirements for Bolting Intended for Use at Any Temperature from Cryogenic to the Creep Range.

The scope of this standard states:

This specification covers a group of common requirements that shall apply to carbon, alloy, stainless steel, and nickel alloy bolting under any of the following ASTM Specifications (or under any other ASTM Specifications that invoke this specification or portions thereof): A193/A193M, A194/A194M, A320/A320M, A437/A437M, A453/A453M, A540/A540M, and A1014/A1014M.

*please turn to page 240*





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For more than half a century, Marson has been a leading provider of blind rivets, rivet nuts, and associated installation tooling, earning a reputation for producing premium quality fastening products. Today, Marson continues to meet the fastening needs of a wide range of industries through its broad line of fasteners and installation tooling.

### **Marson Blind Rivets**

The Marson product line includes one of the industry's broadest lines of blind rivets. In diameters ranging from 3/32" to 1/4", the Marson blind rivet line up includes:

- **Open-End Rivets** — 3/32" to 1/4"
- **Closed-End Rivets** — 1/8" to 1/4"
- **Multi-Grip Rivets** — 1/8" to 3/16"
- **Tri-Bulb Rivets** — 5/32" to 3/16"
- **Q-Lok Rivets** — 3/16"
- **Klik-Lok Rivets** — 3/16" to 1/4"
- **T-Rivets** — 1/4"
- **Plastic Rivets (nylon bodies; Delrin 50 mandrel heads)**

Most Marson blind rivets feature steel construction, with select rivets available in aluminum, stainless steel, and copper. These blind rivets are available in a choice of buttonhead, large flange, and countersunk head styles.

Complementing this line of blind rivets is Marson's wide selection of installation tooling, ranging from simple manual tools to pneumatic tools, designed for production volumes. Each of these tools is designed for easy, fast, and ergonomic installation of blind rivets. In addition, the Marson BT-1 rechargeable tool is designed to install 3/32" to 3/16" blind rivets.



### **Marson Rivet Nuts**

Marson also offers a wide selection of rivet nuts that provide permanent thread placement in thin materials while reducing the surface damage that can occur with other fastening methods. These rivet nuts include the following styles and grip ranges:

- **Flathead Flange** — .020" to .200"
- **Poly-Nut** — .020" to .165"
- **Thread-Sert** — unlimited grip range
- **Large Flange, Low-Profile, Ribbed** — .020" to .312"
- **Large Flange, Closed-End, Ribbed** — .020" to .312"
- **Small Flange, Low-Profile, Ribbed** — .020" to .312"
- **Large Flange, Half Hex** — .020" to .312"
- **Quad-Leg** — up to .394"
- **Large Flange, Cross Bulb** — .020" to .500"
- **External Thread Stud** — .020" to .312"
- **Neoprene Insert** — .015" to 1.575"

Marson rivet nuts, with the exception of Neoprene inserts, feature steel construction. Select rivet nuts are also available in aluminum.

Marson also offers a broad selection of rivet nut installation tooling, in both manual and pneumatic versions. These tools are designed for reliability, productivity, and outstanding ergonomics. Marson manual rivet nut tools provide excellent leverage and durability for installations. Next generation pneumatic tools are lightweight and engineered to maximize stroke and pull force, while providing optimum comfort and mobility for operators.

Marson has met the fastening needs of industry for over 50 years, and it is poised to serve its markets with an even higher standard of excellence for the next 50. 

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## DISTRIBUTOR NEWS

**Fascomp**, a leading Global Manufacturer of electronic hardware, is proud to announce the appointment Rick Rudolph Associates, adding to an already impressive list of Sales Representatives who cover North America.

Rick Rudolph Associates will cover Massachusetts, Connecticut, New Hampshire, Maine, Vermont and Rhode Island.

"Rick brings many years of experience and will work closely with Fascomp Distributors throughout the Northeast. We can now offer our New England Distributors help in the design stages, product training as well as local trouble shooting capabilities." – He added.

Fascomp is equally excited to announce the launching of an easy to use and comprehensive engineer's design catalog filled with 215 pages of the finest quality electronic hardware in the marketplace.

Jason Bertone, Vice-President of Fascomp Incorporated commented "This will be a great tool for our Distributors. Who can expect to see more Fascomp part numbers on BOM's and coming across their desks in the years to come. We will work hard to flood the marketplace with Fascomp catalogs. Our goal is to design in Fascomp part numbers at the OEM's and CEM's throughout the world. We are now assisting engineers in the design stages."

For more information, a quote or samples contact Fascomp today. Tel: 407-226-2112, Fax: 407-226-3370, email: [sales@fascomp.com](mailto:sales@fascomp.com) or visit them at [www.fascomp.com](http://www.fascomp.com).

## DISTRIBUTOR NEWS

Matt Dudenhoeffer, President of **EFC International**, has announced the appointment of Dave Jones as Vice President of Business Units. This promotion recognizes Dave's experience in creating mutually beneficial, long-term business partnerships with suppliers and customers. Dave will be responsible for overseeing EFC Business Unit Management and Strategic Supplier Development. His record of success in understanding the needs and expectations of customers and suppliers is a great asset to EFC.

For more information contact EFC International at 1940 Craigshire Road, St. Louis MO 63146. Tel: 314-434-2888 or visit the website at [www.efc-intl.com](http://www.efc-intl.com).

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### Loctite 243

- Oil Resistant/Medium Strength

### Loctite 262

- High strength red threadlocker

### Loctite 271

- Permanent locking and sealing of threaded fasteners





## Barnaby Myhrum

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

## FOR THE ZILLIONTH TIME - I DON'T KNOW WHAT TORQUE YOU SHOULD USE TO TENSION YOUR BOLTS

Last Spring at NASCC in St. Louis, Nucor gave a great presentation about Structural Fasteners and Bolting. At one point the presenter said that he didn't understand why anyone would use calibrated wrench to install bolts in slip critical or pretensioned connections. At Applied Bolting, this has been our position for years. Even if done properly, calibrated wrench is time consuming and, in our opinion, the least reliable installation technique. We think you're nuts (pun intended) if you use a torque-based installation procedure to tension high strength structural bolts.

As a quick reminder, when using the calibrated wrench method, the ironworkers must determine the proper torque setting to achieve the desired bolt tension EVERY DAY FOR EVERY UNIQUE COMBINATION OF BOLT, NUT AND WASHER. That's a whole lot of testing. The problem is that it assumes that there is an orderly relationship between torque and tension. This may be true when the fasteners are fresh off the production line. But in reality, there are too many variables that conspire to invalidate this assumption in structural bolting. Coatings, lubrication, jobsite conditions, tool variability, and mother nature to name a few practically guarantee that the fasteners will behave differently when the steel is erected. I hope that isn't news to anyone reading this publication.

### Check Out The Torque–Tension Video

The sad truth is that we still get the question: "What torque should I use to install your Squirters™?" Sometimes all they want to know what size wrench to

use, and that's fine. But plenty of people still equate torque and tension. Consequently, we spend an awful lot of time trying to educate people with our "Lunch-and-Learns" and ironworker training. And a couple of years ago we produced numerous training videos on our website to drive the point home. We've had over 45,000 views so far, so I'm hopeful we are making some progress.

The torque-tension video on our website that demonstrates how much friction affects high strength structural bolts. Watch the video online at [www.appliedbolting.com/video-torque-vs-tension](http://www.appliedbolting.com/video-torque-vs-tension) or scan the QR Code.



Using a tension calibrator, we tension a rusty bolt and a new bolt (7/8" A325) with the same torque (450 ft-lbs). The results are shown in the table below.

<b>New Bolt @ 450 ft-lbs</b>	<b>53 kips</b>
<b>Rusty Bolt @ 450 ft-lbs</b>	<b>15 kips</b>
<b>Rusty Bolt lubed with stick wax @ 450 ft-lbs</b>	<b>48 kips</b>

The obvious conclusion is that friction has a tremendous effect on bolt tension. What's more, if you use a "standard" torque value without pre-installation verification, you're asking for trouble. Unfortunately, this isn't so obvious to everyone.



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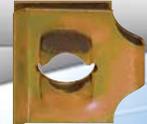
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## NATIONAL FASTENERS DISTRIBUTORS ASSOCIATION

# NEW EVENTS ANNOUNCED AND NEW MEMBERS WELCOMED!

## Executive Summit

Coming up later this year is NFDA's inaugural Executive Summit, November 5-7, at the Ritz-Carlton Kapalua on the island of Maui, Hawaii.



Our focus for this event will be fastener distribution best practices in the areas of Sales and marketing initiatives, Human resources practices, Warehouse operation and Lean training.

Fellow NFDA members will make presentations and facilitate discussions based on proven approaches that will be applicable to companies of all sizes.

- Benefits the company has experienced
- Factors to consider to determine if this will work in your company
- Description of the implementation process

We promise this will be a thought-provoking, interactive and creative dialogue, facilitated by

- Bill Derry • Skip Gallo • Steen Hansen • Jim Ruetz
- Ed McIlhon • Tim O'Keefe • Jay Queenin

## Joint Conference with Pac-West in February 2014

NFDA and the Pacific-West Fastener Association will hold a joint conference February 12-15, 2014 at the Renaissance Esmeralda Resort in Indian Wells, California. This will be the first time the two associations have held an event together, and the partnership supports NFDA's goal to work more closely with other fastener associations to advance the industry.

The task force that is planning the conference content promises:

- Economic update from Dr. Esmael Adibi from the A. Gary Anderson Center for Economic Research at Chapman University
- "Manufacturers are from Mars, Distributors are from



Venus, Part 2," a debate between fastener manufacturers and distributors and follow-up to the panel discussion that took place at the NFDA 2013 Annual Meeting

- Ignite presentations
- Business Owners Forum and Business Executives Forum
- Fun and engaging social events, including golf

## 2014 Annual Meeting and ESPS

Also in 2014 NFDA will hold its Annual Meeting and Executive Sales Planning Sessions (ESPS) at the Embassy Suites New Orleans, June 17-19.



Nothing beats meeting face-to-face when it comes to establishing and strengthening the partnerships that bring the most benefit to your company. The NFDA 2014 Annual Meeting and ESPS will provide you many opportunities to engage with decision makers and offer new solutions. With time set aside for meetings in private rooms, you can take part in numerous discussions with manufacturers from all over the country, in one trip. This event is the most efficient, most effective way to accomplish your immediate and long-term business goals.

In a recent survey, NFDA members said opportunities for developing distributor/supplier partnerships are very valuable benefits of membership, so we're devoting most of the 2014 annual meeting to ESPS.

We also are proud that the economists from the Institute for Trend Research will be on hand at the 2014 Annual Meeting to give us the latest economic update, with a report designed specifically for NFDA members.

**Complete information about the 2014 Annual Meeting will be posted at [www.nfda-fastener.org](http://www.nfda-fastener.org) by February 2014.**

## NFDA Welcomes New Members

The National Fastener Distributors Association is proud to announce the following companies recently joined our membership ranks:

- ABC Logistics
- Brikkxen
- Challenger Components
- General Fasteners
- JIT Industries
- RGS Parts

**For information about membership and NFDA events visit [www.nfda-fastener.org](http://www.nfda-fastener.org) or call 714-484-7858. ☎**



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## WERNER, SWAIN & WILSON: HOW TO BUY FASTENERS

Have a company purchasing philosophy, don't be wooed by small price differentials and learn the product – not just the part numbers – are suggestions from a New England Fastener Distributors Association conference session on "How to Buy Fasteners."

Panelists Ed Werner of EZ Sockets, Doug Swain of Atlantic Fasteners and Steven Wilson of Crescent Manufacturing offered tips during the session moderated by GlobalFastenerNews.com editor John Wolz. Following are excerpts:

### **Werner: Fastener Buyers Should Learn About the Products**

The EZ Sockets president started in the fastener industry in 1974 working in a warehouse and reading the Industrial Fasteners Institute's 1,000+ page Fastener Standards text while riding a train to work.

Werner said the first step is for buyers for distributors to understand the company goal is to resell fasteners for a profit.

"All buying decisions must be in best interest of our company," Werner said. Each company needs to develop a purchasing philosophy.

Werner advised fastener buyers to avoid conflict of interest.

Fastener buyers should get to know suppliers, Werner said. "Interview your vendors. Visit them to evaluate their capabilities."

Werner recalled visiting Asian fastener manufacturers who claimed to be the "biggest and the best," but were operating out of 'chicken coops' and using old-fashioned digital scales. "If I didn't go there, I wouldn't know."

Find out what the return policy is before buying and test products – especially from a new supplier.

Talk to your suppliers to see if they can supply what you need in product, quality, quantity, and delivery. Check their past performance.

Who carries the insurance when goods are in the port during a monsoon? Werner asked.

### **Swain: Read Industry Articles**

Swain urged fastener buyers to "learn the language." That includes abbreviations, units of measure and terms

of sale.

"Read industry articles," Swain suggested. "Stay current about acquisitions and mergers" as those may effect supply.

Create a database of the companies with the expertise in your niche.

"Keep updated," Swain pointed out. Brighton Best once only sold socket products.

Develop a relationship with suppliers. "As a distributor, your suppliers are teammates."

It isn't just price, Swain pointed out. The location of the shipping point, payment terms, and past performance of suppliers are vital factors.

### **Wilson: Specify Everything**

Wilson's top advice is to "communicate, communicate, communicate," via face-to-face, by telephone or email/fax.

Wilson emphasized the need to "specify all requirements at the time of the quote."

Prints are necessary for non-standard parts, Wilson added. And be certain you have the current revisions of the print. Revision "A" is no longer good if you need "B" or "C."

If DFARS (Defense Acquisition Regulations System) is required it also should be specified upfront.

Wilson quoted an email from the under secretary of defense handling DFARS stating specialty metal fasteners manufactured in China cannot be certified to DFARS.

Wilson encouraged fastener buyers to diversify suppliers – "especially if buying offshore" – to assure supply.

Watch for possible domestic sources. Wilson pointed out there has been a nine-fold increase in wages in China since 2000; shipping costs have doubled since 2009; U.S. natural gas is cheaper; the Chinese Yuan has appreciated 25% against the U.S. dollar since 2000.

"Reshoring to U.S. manufacturers is here and now," he declared.

"Communicate!!!" Wilson said in summarizing his advice. "State the requirements in the beginning – at the time of the quote." 

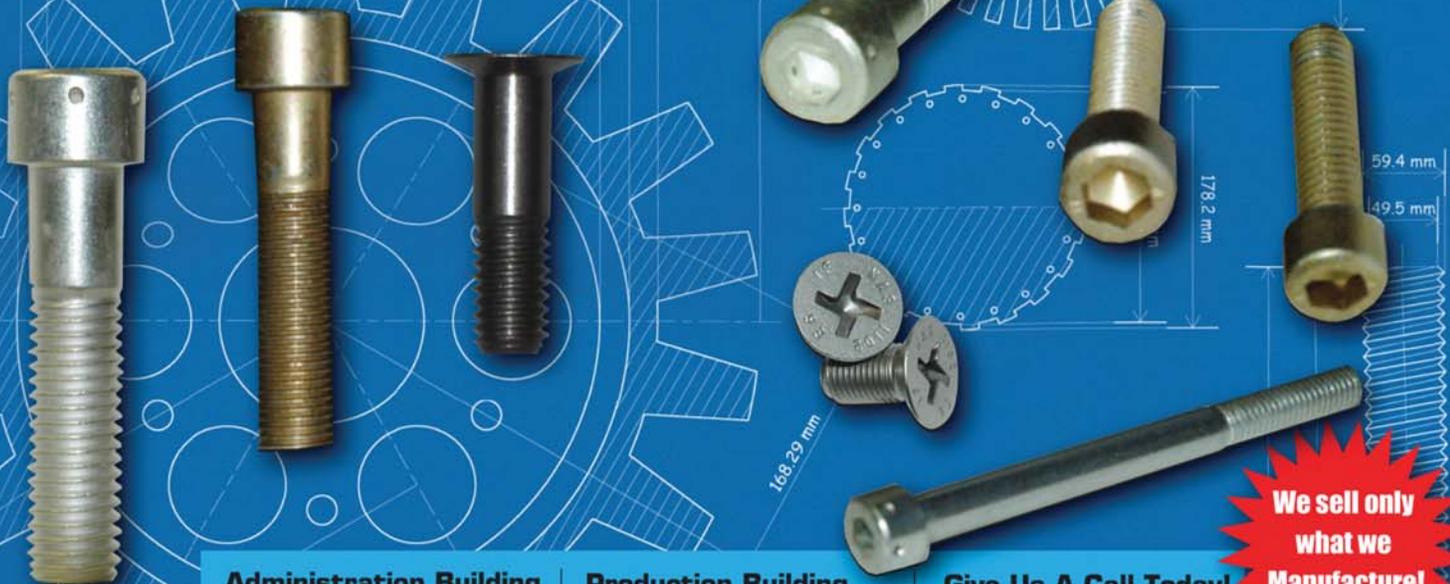
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**DID YOU SAY FREE? COMPUTER INSIGHTS DID!**

Dennis R. Cowhey (Denny), CEO of Computer Insights, Inc., said that they will be giving away yet another FREE SYSTEM as a prize in a contest at the National Fastener and Mill Supply Show in Las Vegas. The drawing will be on the show floor in the Computer Insights, Inc. booth at noon on Friday October 25th. Denny said that the interest in these contests are very gratifying; they started this in 2011. They decided to do it again. The system can be up to 50 users. It is completely FREE. It even includes one year free hardware and software maintenance. The winner does not need to be present to win.

### ***Bolt & Nut Supply Co. - Last Year's Winner***

Kent Stettler, Vice President of Bolt & Nut Supply Co. had this to say, "Last year we were the lucky recipients of Computer Insights generous offering of a complete computer system and software. When I was first contacted that we had won the system I was skeptical about what it was that I had won.



Figuring that it was probably a stripped down version and if I wanted to have a workable system I would have to pay a bunch extra for everything. I couldn't have been more wrong."

### ***Entering The Contest is Easy***

Companies can qualify for this contest by filling out a short survey form at [www.ci-inc.com/survey](http://www.ci-inc.com/survey). Filling out this form will help the distributor discover what The BUSINESS EDGE 2.0 can do for them. It will also give Computer Insights the ability to determine if The BUSINESS EDGE 2.0 is a good fit for the client.

Denny said, "The Fastener Industry has been very good to us. This is our way of giving back. The prize has no cash value, but for someone who needs a new system it is a great opportunity."

### ***Complete System***

The FREE system includes everything the company needs. It includes an IBM Server, User Licenses for up to 50 concurrent users, an Uninterruptible Power Supply and unlimited free training and support. It also includes a year of online backup service. It even includes free programming of all the custom business forms that the system produces. All the business forms (Quotes, Invoices, Requests for Quote, etc.) can be E-mailed, faxed or printed. The only exception is that Windows PC's, Apple or Ubuntu workstations, printers and other peripherals are not included with the free system. The system is for the exclusive use of the winning company and cannot be transferred to another company. Only one entry is permitted per company.

*please turn to page 242*

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## ROTOR CLIP "TRUWAVE" WAVE SPRINGS REDUCE DOWNHOLE TOOL COSTS *by Vincent E. Rodgers*

A downhole tool or downhole drill is used in construction where deep drilling is occurring such as oil & gas, water wells, or geothermal heat drilling. These tools can also be used in open pit mines which are then packed with explosives. Depending on the type drilling, a downhole tool uses compressed air or hydraulic fluid to create the necessary force for the drilling. Generally speaking, a downhole tool is comprised of a percussion mechanism or "hammer" that is located behind the drill bit. The drill pipe feeds the necessary force and rotation to the hammer via compressed air or hydraulic fluid. As the hole gets deeper, drill strings are added to keep supplying air or fluids to the drill pipe and hammer.

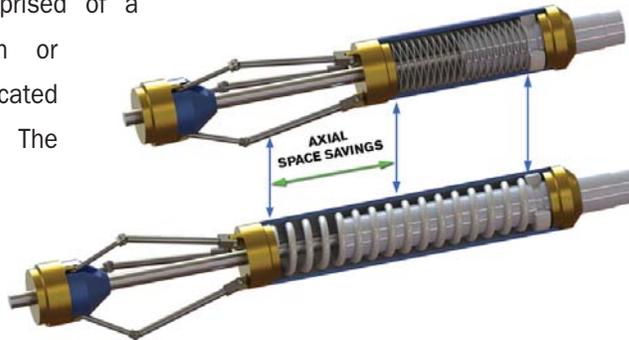
Spiral Wound Multiple Turn Wave Springs, Crest-to-Trough Designs, are used to pre-load anchoring devices of downhole tools that will bite into the casing bore once the tool has been actuated.

Customer experience has shown that once the slips of the anchoring devices have a good bite in the casing, a nominal load needs to be applied to the heel of the slips to prevent them from de-energizing due to movement during applied loads to the tool. Normally, the required load is provided by a compression spring (coil spring), but these can be replaced by a multiple turn wave spring, crest-to-trough design.

In that way the axial space in the application can be reduced, allowing the engineer to design the whole tool in a much more compact way. This saves material

and reduces costs effectively. In addition, the wave spring provides a more constant load during the required travel (which is necessary to actuate the tool) compared to a conventional coil spring.

These wave springs can also be made from exotic alloys including Inconel and Elgiloy to withstand high temperatures and corrosive environments often associated with these types of tools. 



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Mag Daddy™ Fasteners is pleased to announce that Albany Steel & Brass Corporation has been appointed as our stocking distributor. For product information and to purchase Mag Daddy™ Fasteners from stock, contact:

**Albany Steel & Brass Corporation, 1900 West Grand Avenue, Chicago, IL 60622, Tel: 312-733-1900, Fax: 312-733-9887, e-mail: sales@albanysteel.com**

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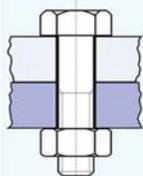
Mag Daddy™ Fasteners are quickly gaining acceptance, and are being used in securing Low Voltage cabling, Temporary Wiring, HVAC, Air Hoses, Wires along Electrical Panel Boxes for that clean finish, holding down Hydraulic lines, and inside various products of manufacturers. Use a universal magnetic glue plate or magnet mount on a car's headliner, panels with broken/missing housing, machine guards, back of a work light, mount tools to a wall, etc.

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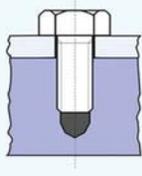
## Training Fastener Sales People?



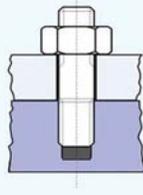
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- **IFI Fastener Technology Handbook**
- **Mechanical Fastening and Joining by Bengt Blendulf**
- **TORQUE Book for Fasteners**

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Go to <http://www.indfast.org> and click on Reference Books



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## DISTRIBUTOR NEWS

**ND Industries**, an industry leader in fastener adhesive and sealant material development and processing, is pleased to announce the following additions to its staff:



**Bonnie M. Spanke, CPA**, has joined ND Industries as the Chief Financial Officer and Director of Human Resources. She is a Certified Public Accountant with over 25 years of experience in accounting and business.



**Bryan McClelland** is ND's Vice President of Sales and Engineering, reporting directly to ND Industries President, Richard Wallace. Utilizing his background in Material Science Engineering, Mr. McClelland will be focused on the development of innovative processing equipment for use by ND and its growing network of worldwide licensees.



**Craig McDaniel** has been brought on as the Assistant General Manager of ND's Southwestern Fastener Processing Division in Arlington, Texas. His ten years of fastener coating experience and an additional decade in the electronics industry are assets to ND Industries as it continues to expand and diversify.



**John T. Cain** is the new Vice President of Sales for Vibra-Tite, the bottled products division of ND Industries. He brings a wealth of knowledge from over twenty years of combined experience formulating products for the threadlocking and urethane industries. Mr. Cain joins a growing team of Research & Development chemists dedicated to expanding ND and Vibra-Tite's core technologies.



**Rob Chraska** recently became ND's Environmental, Health and Safety Manager. Mr. Chraska comes to ND with six years of related experience. He received his B.S. Degree in Occupational Safety and Health from Oakland University in Rochester, Michigan, and his Masters Degree in Occupational Safety Management from Embry-Riddle Aeronautical University.

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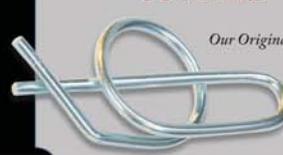


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Here is an excerpt from our Cable Ties 101 article, featured in Spring 2011, where we discussed new blends and the manufacturing process and hydration of cable ties:

*"As noted earlier, cable ties are manufactured by an injection molding process. A cable tie right off the injection molding machine can be referred to as 'dry-as-molded'. At this point, a tie is at its strongest but most brittle stage. Manufacturers must improve its ductility in order for the tie to clamp consistently and eliminate breakage during the setting process. They do so by adding a specific amount of moisture to each bag of cable ties before sealing. Ductility is increased with a minimal loss of strength. By the time our customers receive their cable ties, all moisture has been absorbed and the product is ready for use - ductile and yet strong." We continued: "In an effort to maximize the overall performance of all nylon cable ties when being installed in extreme cold and dry winter conditions, we are working with our supplier and testing has begun on a modified Nylon 6/6 blend."*

That article was written nearly two years ago, but the Arctic ties are available now. Call or stop by the National Industrial Fastener & Mill Supply Expo. – Oct. 24th - 25th Booth 834, or STAFDA Annual Convention & Trade Show –

Nov. 12th - 13th Booth 211, where we will be featuring Arctic ties and additional clamping products.

To complement our Cable Tie Express Clamping, Bundling, and Strapping product lines, we have also added Ideal/Tridon clamping products. This Cable Tie Express-Ideal/Tridon partnership was formed to provide access to their entire line of engineered couplings from simple hose clamps to more advanced designs, all of which are available for immediate shipment.

The Ideal/Tridon WaveSeal family of clamps can



potentially eliminate or reduce the number of different clamp styles and sizes customers need to stock by using a new patented design. This reduces overall finished product weight and offers improved clamping performance for new and existing user applications. These savings are of particular interest in the transportation

industry.

As many of our customers have learned from our extensive training seminar, when it comes to performance, the correct moisture level of cable ties is as important as tensile strength. In addition to tensile testing, we have recently added moisture test equipment to our Quality Lab in order to inspect incoming material.

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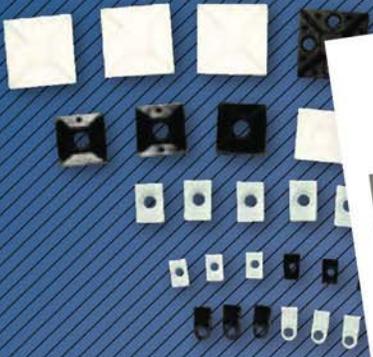
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## MID-ATLANTIC FASTENER DISTRIBUTORS ASSOCIATION

# MAFDA ANNUAL GOLF & SCHOLARSHIP GREAT GOLF, GREAT FRIENDS & A GREAT CAUSE

Broadrun Golfers Club played host to the MAFDA Annual Golf and Scholarship Classic held on June 20th, 2013. Forty eight golfers were greeted with fantastic weather (although a bit steamy!), a fantastic embroidered visor, and opportunities to win a myriad of prizes including electronic devises, a large screen TV, and even a custom engraved baseball Bat which was entrusted to the 'lucky' long-drive winner!

**Our sponsors this year again came out BIG!** Eurolink and Stelfast shared the Event Sponsor honor, Brighton-Best continued their tradition of rewarding any hole in one efforts with LOTS of cash (unfortunately no winners, but many were close), Solution Industries was again the favored industry specific trophy sponsor. Murty Associates and Fall River Manu. sponsored the much endeared beverages, ND Industries was the grateful lunch sponsor, and Lee S Johnson Associates. sponsored goodies 'at the turn'. Last, but certainly not least, our grand prize sponsor Stelfast AGAIN provided a lucky participant with a large screen LCD television!



Thank you sponsors – you are why our golf outing is consistently heads and shoulders above the rest, we

truly appreciate everything you do for the association.

## YOU ARE THE BEST!

The golfers also came out to play. Team Lee S Johnson Assoc. took home the coveted first place trophies, while team ND Industries finished second. In addition to trophies, the two winning teams were provided spending cash at the pro shop, as were winners of the Long Drive competition, closest to the pin and straightest drives. Lots of winning, lots of smiling faces! A highly energetic raffle drawing followed, concluding with the awarding of the Grand Prize large screen TV. 'Thank you' hardly covers our appreciation for all who attended. Your generosity and support of the association and scholarship fund is all inspiring.

Emphasizing the true purpose of the event, the evening concluded with the announcement of the scholarship award winners. Congratulations to Hallie Schreiber (sponsored by Specialty Resources) who was awarded the ND

Industries Scholarship and April LaFreniere (sponsored by Fall River Manufacturing) awarded the MAFDA Board Scholarship. Two very deserving applicants who we proudly support in their educational pursuits. 



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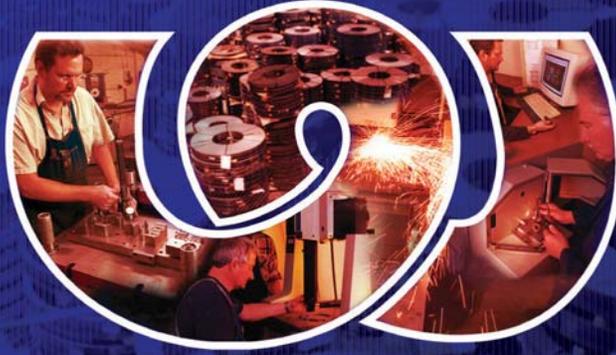
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## DISTRIBUTOR NEWS

**Elgin Fastener Group (EFG)** is ready to begin utilization of a 25,400 sq.ft. distribution center that will also include an A2LA accredited testing lab.

Located in the Brook Park suburb of Cleveland, the facility will allow the three Cleveland-area divisions of EFG (Telefast Industries, Quality Bolt & Screw, Chandler Products) to consolidate their packing and shipping operations, while providing a centralized location for product testing, resulting in improved lead times for their customers.

Plans are already underway to expand testing capabilities into additional areas including magnaflux, die penetrant, and fatigue testing. Under the leadership of EFG Cleveland Operations GM Carl Ondraka, the distribution center will be managed by Mike Ware. EFG Product Development Manager Frank Pushpak will oversee project management of the testing lab. Additional EFG team members who will operate the distribution center and lab are featured in the accompanying photo.

For more information, contact Elgin Fastener Group LLC, 4 South Park Ave., Suite # 203, Box 5, Batesville, IN 47006. Tel: 812-689-8917, Fax: 812-689-1825. Email: quotes@elginfasteners.com. Visit them on the internet at www.elginfasteners.com. Also find Elgin Fastener Group on Facebook and Twitter.

## DISTRIBUTOR NEWS

**Porteous Fastener Company, (PFC)**, has released several feature updates to their online ordering system, including the removal of Flash, so iPad users can now use it without visibility issues.

Among the other new features to go live: Fast Item Entry, Quote Upload, Merge Quotes, Multi Select with Item Builder, Certs Request by Line and detailed Order History information.

"We are excited about these new releases! They were designed by our

eCommerce Task Force, all of whom spent time talking with our customers about their online ordering needs. There are some real time savers here for users - we think they are going to like what they see!" Pam Lloyd, EDI Coordinator.

For a demo of the new features or if you'd like help getting your cross reference list set up, contact your local PFC sales office or visit the help area of [www.porteousfastener.com](http://www.porteousfastener.com) after you've logged in.

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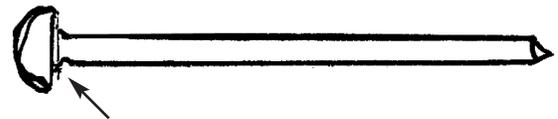
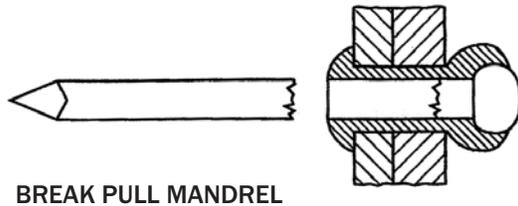
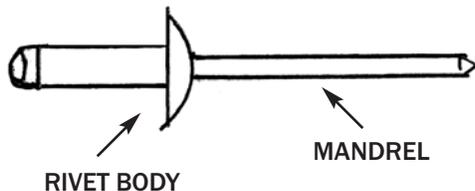


## Anthony Di Maio

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](mailto:tdimaio@verizon.net).

## THE LARGE RANGE OF STRENGTH VALUES OF BLIND RIVETS

Blind rivets have a shear and tensile value that will satisfy all blind rivet applications.



The mandrel is the component that is pulled into the rivet body and when the mandrel head reaches the work piece being riveted and the resistance is equal to the tensile strength of the mandrel, the mandrel will break at the work piece.

When a blind rivet is being set in a work piece, the mandrel head will enter the rivet body and the rivet body expands as the mandrel head travels into the rivet body. The rivet body will be compressed against the work piece being riveted and when the resistance is equal to the tensile strength of the mandrel, the mandrel will break. This compression of the rivet body against the work piece is called "Clamp Load" The rivet body will compress the work piece together, thus giving a good secure riveted joint.

After the mandrel breaks the spent mandrel is either collected by the setting tool or discarded.

The different diameters and metals used offer different shear and tensile values.

Break Mandrel Blind Rivets (IFI-114 specification) have a shear range of 70 lbs. and up to 1700 lbs. and a tensile value of 80 lbs. up to 2,100 lbs. The shear and tensile values are the value of one blind rivet.

Break mandrel blind rivets are manufactured in five different diameters 3/32, 1/8, 5/32, 3/16 and 1/4inch. Each diameter is manufactured in various metals. The different metals give a different shear and tensile value to the set blind rivet. The shear and tensile values or strength, of a set blind rivet is related to the rivet body and the metal used to make the rivet body. Aluminum rivet bodies give the low range of shear and tensile values and stainless steel gives the highest shear and tensile values.

A break mandrel blind rivet is made up of two components, One being the mandrel and the other the rivet body.

Diameter	Metal	Shear lbs.	Tensile lbs.
3/32	Aluminum	70	80
3/32	Steel	130	170
3/32	Stainless	230	280
1/8	Aluminum	120	150
1/8	Steel	260	310
1/8	Stainless	420	530
5/32	Aluminum	190	230
5/32	Steel	370	470
5/32	Stainless	650	820
3/16	Aluminum	260	320
3/16	Steel	540	680
3/16	Stainless	950	1200
1/4	Aluminum	460	560
1/4	Steel	1000	1240
1/4	Stainless	1700	2100



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## BEGINNING OUR SECOND CENTURY OF MANUFACTURING AND SERVICE

Chicago Hardware & Fixture Company is proudly entering its second century as a family owned, premier USA manufacturer of steel forgings, wire forms, and threaded rod. Servicing the fastener, industrial, rigging, marine, and construction distribution channels since 1912, the current owners, Tom Herbstritt, and his son Brian Herbstritt, have remained committed to providing the highest quality, American made products.

In 2013 Chicago Hardware will be introducing an expansion of its current product line as a result of recent major capital improvements at its three Chicago area plants.

Additional capacities in our forging and wire forming processes will now allow us to offer increased sizes and capacities in our forging and wire forming product lines. We are also planning expansions into more stainless and alloy materials.

Chicago Hardware, along with its Chicago area manufacturing facilities, has three additional distribution centers where our products are warehoused and shipped into the local markets they cover. Located in the metropolitan areas of Atlanta, Houston, and Los Angeles, we are able to serve the needs of our distributor partners in a timely manner. ⚙

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# ZaGO

## ZaGO Manufacturing Inc.

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www.ZaGO.com

## 20 YEARS OF GROWTH - 20 YEARS OF INNOVATION

Founded in 1993 in Newark, New Jersey, ZaGO Manufacturing Company is known worldwide as a quality manufacturer of sealing products, including self-sealing fasteners, sealing switch boots and covers for electrical switches and other environmentally sensitive equipment. Self-sealing fasteners are machine fasteners manufactured with a groove in which an o-ring is fitted so that there are no leaks into or out of the equipment in which they are installed.

After twenty successful years in business, ZaGO recently had a 50-kilowatt solar system installed at their headquarters and manufacturing operations in Newark, NJ. When state and local leaders heard of ZaGO's investment in their facility, as well as their twenty years of success, they organized a celebration at the Rutgers Business School to honor ZaGO as a leader in the business community.

At the June 25th event ZaGO was recognized as a manufacturing success story with Newark Mayor and Democratic nominee for New Jersey Senate Cory Booker praising ZaGO's longevity and investment in their business by saying, "This is a cavalcade of wins evidenced in one extraordinary company." In addition, ZaGO was commended with speeches by Dr. Glenn Shafer, Dean of

the Rutgers Business School; Dr. Lei Lei, Chair of the Rutgers Supply Chain Management and Marketing Services Department; Jerry Creighton, Executive Director, New Jersey Institute of Technology (NJIT) Enterprise Development Center; Chip Hallock, President & CEO, Newark Regional Business Partnership; and Lyneir Richardson, CEO, Brick City Development Corporation.

ZaGO was launched in 1993 in the business incubator of the New Jersey Institute of Technology Enterprise Development Center. After successfully graduating from the incubator in 1998, ZaGO moved to a rental facility in the Ironbound District of Newark. In 2003, ZaGO decided to make a long-term commitment to doing business in the City of Newark and bought a multi-level 15,000+ square foot facility in the South Ward of Newark. Purchasing the new facility has allowed ZaGO to expand its array of sophisticated American made machinery enabling it to accurately and

efficiently manufacture custom-made fasteners and other sealing components. In 2012, ZaGO determined that installing a solar array on the roof of its manufacturing facility would allow it to increase the value of its investment in Newark and stabilize its energy costs at the same time.

*Continued on page 98*



*Above: Newark Mayor Cory Booker speaking at the June 25th event at Rutgers Business School: "This is a cavalcade of wins evidenced in one extraordinary company."*

*Below: Pete Ramsey, SEI Energy presenting photo of solar array to ZaGo with Newark Mayor Cory Booker, Zago Vice-President Gail Friedberg, Zago President Harvey Rottenstrich and Zago General Manager Jackie Luciano-Brito.*





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## NEW ENGLAND FASTENER DISTRIBUTORS ASSOCIATION

# NEFDA ELECTS OFFICERS AND APPOINTS COMMITTEE CHAIRS FOR 2013-2014

by Joe Soja

NEFDA held its Board and Committee Chair Meeting on Thursday, July 11, 2013 at The Duck Restaurant in Sturbridge, MA. The following Officers were elected:

**Chairman:** Steve Wilson, Crescent Manufacturing

**President:** John Sullivan, Accurate Fasteners

**Vice President:** Barry Carpe, All-Tech Specialty Fasteners, LLC

**Treasurer:** Rick Rudolph, Rick Rudolph Associates, LLC

### COMMITTEE CHAIRS:

**Education:** Jay Queenin, Specialty Bolt and Screw

**Hall of Fame:** Rick Ferenchick, Arnold Industries, Inc.

**Publicity:** Peter Wisk, Northeast Fasteners Co., Inc.

**Scholarship Committee:** Pat Lang, Kanebridge Corporation

**Scholarship Golf Outing:** John Conte, Fall River Manufacturing, Inc.

**Table Top Committee:** Dan Bielefield, Smith Associates, Inc.

## NEFDA Announces Upcoming Education Programs 2013 -2014

**When:** Oct. 10, 2013

**Topic:** Specialty Fastener Alloys presented by Aerodyne Alloys  
Aerodyne Alloys based in South Windsor, CT. a supplier of specialty alloys to fastener manufacturers will open their facility for a plant tour and power point presentation. The program will start at 10:30 A.M.

**When:** First Quarter 2014

**Topic:** Technology presented by Distribution One, Inc.

Distribution One, Inc. is a leader in software technology for fastener manufacturers and distributors and also is a member of NEFDA. The date, time and location of this presentation will be announced shortly.

NEFDA is also looking into having an economic seminar which members will find helpful in their business planning. 

## 20 YEARS OF GROWTH - 20 YEARS OF INNOVATION *continued from page 96*

ZaGO's serious commitment to manufacturing high quality products in the USA was praised at the event, as was its dedication to doing so in a manner emphasizing sustainability and smart growth.

"In order to maintain our high quality standards for our products, we made the long-term decision to manufacture all our products here rather than to outsource. Since we are here in Newark for the long run, we are committed to investing in our facility and decided to go solar. Our products are now proudly manufactured with renewable energy," explained Gail Friedberg, Vice President of ZaGO.

"To continue to keep our high quality products cost competitive, we investigated ways to curb our expenses and electricity was a logical choice to consider," added Harvey Rottenstrich, President of ZaGO. "Being energy independent is important to us. This decision not only lowers our operating costs, it reduces the risk from the volatility of future electric prices. By having a long-term plan, our customers have told us they appreciate having a stable partner like ZaGO who is investing this way." He

continued, "they also appreciate our stable, direct supply chain which ensures the availability of their mission critical parts." This has made ZaGO particularly competitive as the pitfalls of outsourcing have become more evident over time.

According to Mr. Rottenstrich, "the nature of our business began to change when we started receiving more requests for quick turn-around on specialty parts made-to-print." ZaGO's ability to modify existing parts on a short lead time has made it an important supplier for fastener distributors with services including high speed drilling, cut-off, chamfering, grooving, captivation and other machining services. "These services simply cannot be outsourced," concluded Mr. Rottenstrich.

ZaGO's recognition at the Rutgers Business School event is a reflection of twenty years of commitment to intelligent growth and continued innovation. After 20 years in business, ZaGO continues to bring enthusiasm and excitement to the task of tackling the challenges they know they will face in the competitive global market place in the decades to come. 



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# UNDERSTANDING TORQUE-ANGLE SIGNATURES OF BOLTED JOINTS

by Jeff Drumheller *Fastener Testing Engineer*

Torque-angle curve analysis is known to be one of the most basic and practical methods of determining not only what the fastener went through during the tightening process, but also the integrity of the joint itself. The ability to interpret the resulting signature of the tightening path gives an understanding of the installation, and in some cases the failure characteristics of a bolted joint.

The following sections will describe the various tightening zones of the torque-angle signature, analysis of the curve, tightening strategies using torque and angle specifications, and joint auditing methods utilizing torque-angle analysis.

## Tightening Basics

Torque is applied to a threaded fastener in order to stretch the bolt while compressing the clamped parts. This compression of the clamped is known as the preload or clamp load. Prior to the assembly going into service the bolt stretch (tension) is equal to the clamp load.

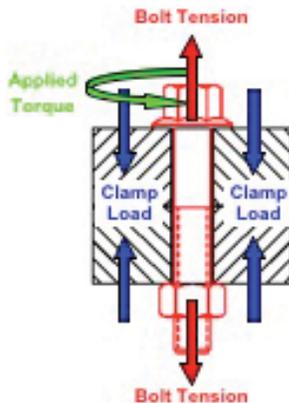


Figure 1: Fastener Loads During Tightening

**NOTE: A properly designed joint will attain enough clamp load with the specified installation torque to overcome any projected working loads the joint will see in service and thus keep the assembly together**

When applying torque to a fastener there will obviously be some resistance due to the friction effects in the bearing and threaded regions. If the resistance is great enough the bolt (or nut) will not turn and either the proper preload will not be attained or a joint failure will occur (due to torsional stresses or a cross-threading situation). To insure that fastener movement occurs both the input torque and angular displacement of the fastener are monitored. Plotting torque in terms of angle of turn results in the torque-angle curve.

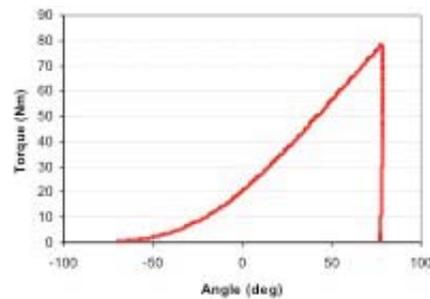


Figure 2: Torque-Angle Curve



Figure 3: Angular Displacement

**Torque:** The amount of energy applied to a bolt or nut.  
**Angle:** The amount angular displacement of a bolt or nut.

please turn to page 246



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## SOUTHWESTERN FASTENER ASSOCIATION

# 2014 SPRING CONFERENCE & EXPO WESTIN DFW HOTEL, APRIL 24-27, 2014

Distributors and Vendors will gather at the Westin DFW Hotel in Arlington, Texas on April 24, 2014 for the Southwestern Fastener Association Spring Conference and EXPO. An opening reception will kick the Conference off on Thursday evening the 24th. The SFA Annual Business Meeting will be conducted on Friday morning the 25th. Golfers will tee it up at one of the area's championship golf courses Friday afternoon and will conclude with an awards dinner for full conference registrants Friday Evening. The big event of the EXPO will open at 10:00 A.M. on Saturday Morning. This is a departure from previous shows that opened at 1:00 P.M. The change was made because numerous requests from Exhibitors to conclude the EXPO in time for them to depart in the afternoon on a flight home. The SFA Board will review the impact this change will have for future events in their efforts to be of greater service to their members and Exhibitors.

Exhibitor Agreements for the 2014 EXPO can be downloaded from the SFA web site at [www.sfa-fastener.org](http://www.sfa-fastener.org). As a convenience for exhibitors, payment can also be made on the web site.

SFA has rolled out an upgraded and more informative web site for members. Michael Rodriguez, The Fastener Connection and SFA Technology Committee Chairman stated that the enhancements include: New signup for news and announcements under the "Members Only" feature; New CMS page for Conferences and Events with e-commerce functionality; New CMS resources page; New Calendar of Events Module and a new Member Portal Interface with password-protected access to many of the pages on the web site. Scholarship Applications and grading guidelines are available along with a list of 2013/14 scholarship winners are listed under the scholarship tab. Members can get the latest SFA news on events and activities at [www.sfa-fastener.org](http://www.sfa-fastener.org).

### *In Other SFA Activities*

The Association has awarded eleven scholarships to students from SFA member companies. The 2013/14 Will Rodriguez Scholarship Recipient was Mallory Condon,

representing Hillsdale Terminal, Jonesville, Michigan. Regular scholarship recipients were: Jared Burks, Tifco Industries, Inc., Houston, Texas; Colin Ellis, Interstate Threaded Products, Dallas, Texas; Reid Frazier, Linus Products, Inc., Houston, Texas; Michael Jackson, Delta Fasteners, Inc., Houston, Texas; Madelyne Hallum, SBS Industries, Tulsa, Oklahoma; Abby Jackson, Delta Fasteners, Inc., Houston, Texas; Louis Marelllo, Metric & Multistandard Components, Irving, Texas; Brianna Rose, Tifco Industries, Inc., Houston, Texas; Justin Smith, Hillsdale Terminal, Jonesville, Michigan and Timothy, Vath, Solution Industries, Middleburg Heights, Ohio. Competition was very close in selecting this year's

winners. In some instances the scores were only separated by two one-hundredth of a point. Ron Garrett, SBS Industries and SFA Scholarship Committee Chairman, says that it is extremely critical for all applicants to follow the established guidelines that are a part of the scholarship application. If any component of the guidelines is not included with the



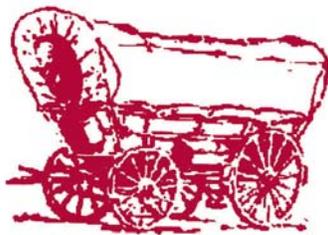
application, the final score will be impacted with a lower grade. 2014/15 SFA Scholarship Applications and Guidelines can be downloaded from [www.sfa-fastener.org](http://www.sfa-fastener.org) or they can be requested by email at [swfa@swbell.net](mailto:swfa@swbell.net).

Tom Stocking, Stelfast, Inc. and SFA Chairman of the Board, welcomed three new members to the Board of Directors during the September Board meeting. New Board Members are Dick McDaniel, Porteous Fastener Co., Bill Frazier, Linus Products, Inc., and Tony Gross, Greenslade and Company. Stocking also extended thanks and a debt of gratitude for the members leaving the Board of Directors. Departing the Board were Don Carr, Stelfast, Inc., immediate past Chairman, John Longyear, Metric and Multistandard Components, SFA Treasurer for the past three years and Mary Chambers, Assembly Products & Sales. Stocking noted that Chambers, who previously served SFA as President in 2001, has served the SFA Membership as Treasurer for three years and Assistant Treasurer for two years during her last tenure of six years on the SFA Board. 

## Celebrating Our 10th Anniversary!

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## IMPROVING UPON TRIED AND TRUE METHODS OF HARD WORK IN THE FASTENER INDUSTRY

*by Robert Lopez, Specialty Sales*

It isn't just enough to work hard any longer, you have to work harder and smarter. The fastener rep industry and Industry as a whole is going through changes. New channels of distribution and new ways of marketing are changing the way industry does business. We believe businesses that can leverage these changes will have a significant advantage to those satisfied with the status quo. At Specialty Sales we have made the necessary changes to keep up with today's market place. We have invested our resources in a new website and building our

presence on LinkedIn, Twitter, and Facebook. We have upgraded to Goldmine Premium edition CRM software, in order to track and analyze sales and market trends.

There is no substitute for in-person, relationship based selling. Customers will always want to buy from people they know, like and trust. However, with today's technology, some customers are now relying on new methods of sourcing and engagement such as social media and highly targeted permission based marketing. Specialty Sales understands this and we are working with our Principals, Customers and Prospects, to meet or exceed their individual needs.

Specialty Sales is a leading Manufacturers Representative Organization (MRO) servicing Commercial, Industrial, Electronic, automotive and aerospace fastener distributors and Manufacturers throughout California, Arizona, and Nevada since 1992.

Our staff includes 3 highly trained and experienced professionals with a combined 80+ years in the Fastener Industry. Our company represents some of the most prestigious manufacturers in our industry including; Binder Metals, CBS Fasteners, Coronet Brass, Electronic Hardware Corp. (EHC), Engineered Fastener Corp. (EFC), Eurolink Fasteners, E-Z Sockets, Hollbrook Mfg., Industrial Rivet (Rivet King), Jergens Inc., ND Industries, Northeast Fasteners, Pacific Coast Bolt, P.M.B. Precision (Spartan Instruments), Sesco, S&M Retaining Ring, Volt Industrial Plastics and XL Screw Corporation. 

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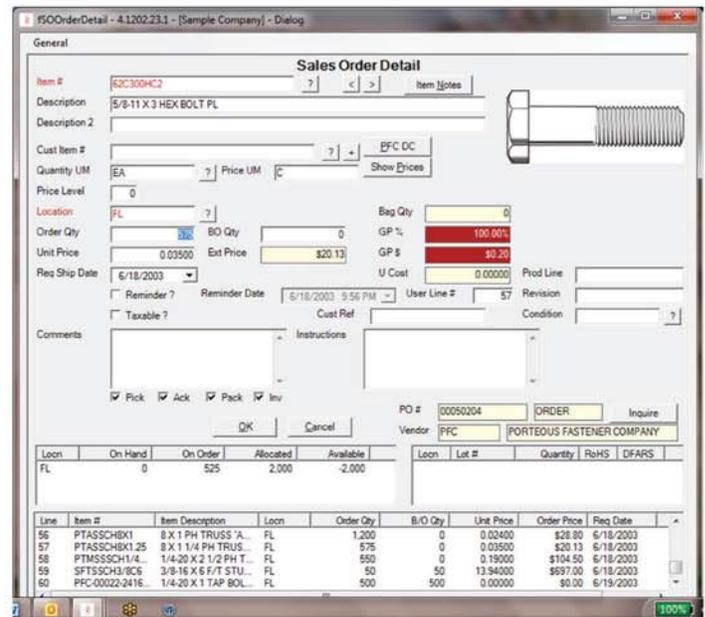


"Purchasing INxSQL was the best decision our company could have made in an economic time when every dollar counts. After being disappointed and swimming in unresolved issues from other software solutions, we had our data converted, our staff trained, and our system operational in just a few months. We have been greeted with quick, friendly resolution from INxSQL staff with every issue we have encountered. I would certainly recommend INxSQL for businesses who want to continue to grow, with total confidence in their software provider."

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Associated Fasteners, Inc

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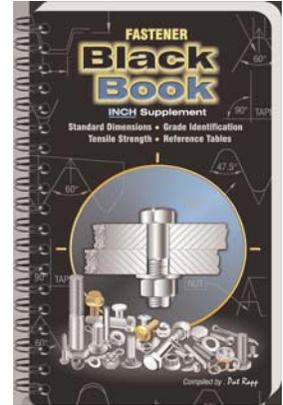


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**DISTRIBUTOR NEWS**

**The Fastener Black Book** – 1st Edition was released in 2007 and proved to be an instant success with both trainees as well as those people involved in the fastener industry on a day-to-day basis.



Since the release of the Fastener Black Book – 1st Edition, the Publishers received numerous requests and input mainly from USA readers for material especially related to INCH Fasteners and this prompted the release of the Fastener Black – INCH Edition.

While the information contained in the Fastener Black Book – 1st Edition contains a wealth of information mainly on metric fasteners, the Fastener Black Book – INCH Edition contains information specifically designed for INCH fastener users and related technical information. It is presented in the same convenient and user friendly pocket book format, pictorially depicting standard INCH fasteners alongside useful relevant information, without bogging-down the reader with excessive in-depth technical and specification information.

Pat Rapp, the author of the Fastener Black Book, has been involved with the Engineering Supply, Fastener and Cutting Tool industry for the past 30 years and has gained an in-depth knowledge of the day-to-day questions and information sort after by both regular users as well as trainees in the fastener industry. His position as product-specialist for one of the largest engineer's supply houses, put him in a unique position of having first hand access to in-depth industry information, manufacturing processes, fastener applications, end-user requirements and the distribution of fasteners.

Pat indicates that It took him the best part of 2 years to research and compile about 400 pages and condense it into a 196-page handbook. He points out that the Fastener Black Book- INCH Edition is not intended to be specification manual but rather a quick reference for identification purposes to relevant information on the more commonly used INCH standard fasteners.

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## NEW AND IMPROVED HOOK-ON BINS<sup>®</sup>

Established in 1922 and based in Durham, Connecticut, The Durham Manufacturing Company has built a reputation as one of the top producers of quality safety and storage products to the fastener industry. Durham Manufacturing has plants located in Durham, Connecticut and Juarez, Mexico. Durham employs state of the art technology and ranks among the top manufacturing and distribution facilities in the industry, encompassing more than a quarter of a million square feet of space.

Durham's newest product, Hook-On Bins<sup>®</sup> are now molded by Durham, in their Juarez, Mexico facility. The Hook-On Bins<sup>®</sup> line consists of five sizes: Model PB30210 is 4"W x 5"D x 3"H, Model PB30220 is 4"W x

7"D x 3"H, Model PB30230 is 6"W x 11"D x 5"H, Model PB30240 is 8"W x 15"D x 7"H & Model PB30250 is 16"W x 15"D x 7"H. All models are available in three colors; #21 Yellow, #17 Red and #52 Blue and are dividable with horizontal or vertical dividers. With Durham's five sizes and added dividers, the units are optimal for the storage and organization of small parts or fasteners.

Though their Hook-On Bins<sup>®</sup> can be used in most universal systems, they are best used in

Durham's line of 12, 14, and 16 gauge cabinets, workbenches, workstations and carts. They are ideal for vendor managed inventory programs and are perfect for merchandising MRO supplies, personal protective equipment, tools and more. 



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## MID-WEST FASTENER ASSOCIATION

**FASTENER TECH™ '13****A BIG THANK YOU TO ALL THOSE INVOLVED**

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**FASTENER TECH™ '13**, closed with the best records since 2007. Exhibits, attendance and seminars were up. With over 150 exhibits (list may be found on our website [www.mwfa.net](http://www.mwfa.net)) and two other shows (SurFin and Amerimold) open to **FASTENER TECH™ '13** participants, the one stop-three shows concept was well received. Fastener Tech '13 exhibitors included manufacturers, platers, heat treaters, secondary services and other services to the fastener industry.

Several Outstanding Seminars were conducted, allowing additional education experiences in many facets of the industry. Seminars/sessions included: Fastener Technology Training Workshop (presented by Fastener Training Institute), Purchasing Safeguards Seminar (presented by Mid-West Fastener Association), Seven Things you Need to Know to Succeed Now (presented by Women in the Fastener Industry), Making Fasteners from Beginning to End (presented by Fastener Technology Int'l), Trends and New Tools for an Evolving Industry (presented by FCH Sourcing Network and National Fastener Distributors Assoc.) and Institute for Trend Research (presented by National Fastener Distributors Assoc.).

After these events, several people always ask the total of attendees. While attendees surpassed the last three Fastener Tech events, the most important fact was who the attendees were. One exhibitor hit it on the head stating: "I had such great leads, it doesn't matter how many were here." We hope all attendees were lucky enough to have this same experience. We all know there are many others who could have attended but it is important we all spread the word of important upcoming events in our industry. But for those who like numbers, there were over 1600 between attendees and exhibitors. This is confirmed attendance-not preregistrants who did not show.

The social networking is always great. The All Industry Reception and meeting Fastener Friends at Rosemont's new area-Park at Rosemont-were both fun events enjoyed by many.

*Thank you to all participants in***FASTENER TECH™ '13!!**

We appreciate the support and participation by all who exhibited and attended Fastener Tech '13.

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## SECURING THE ESSENTIALS

Sems and Specials Inc. located in Rockford Illinois USA recently celebrated 21 years in business and has introduced their new website "Securing the Essentials"

Sems and Specials Inc. is a domestic fastener manufacturer that totally supports the Fastener Distribution Market. Examine their Service, Quality, Reliability, Speed, Sales and Engineering Support and other Essential Advantages.

Sems and Specials Inc. product capability range is #2 (M2) thru 1/2 (M12) Diameter - Lengths up to 5". They also have unique length capability up to 7". Materials available are Alloy and Medium Carbon Steels, Stainless, Brass, and Aluminum. Sems and Specials Inc. recently secured the registered trademark Swageform®, a product with 40 years of proven applications. Special



features provide the following assembly process benefits, quick and easy installation, eliminates tapping of holes, low drive torques, high strip out torques, threads are formed not cut, eliminating chips. Swageform® High Performance Thread Rolling Screws feature a special Swageform® design which consists of 3 - 4 forming lobes located on the flank of the tapered lead threads, 120 degrees apart. The initial contact of the lobes with the hole significantly reduces the installation drive torque. Visit their new website and explore their in-depth

Product Line, Expert Engineering Capabilities, Warehousing and Supply Chain Management cost savings systems. Most importantly, contact them to secure an order and experience their specialized treatment. 

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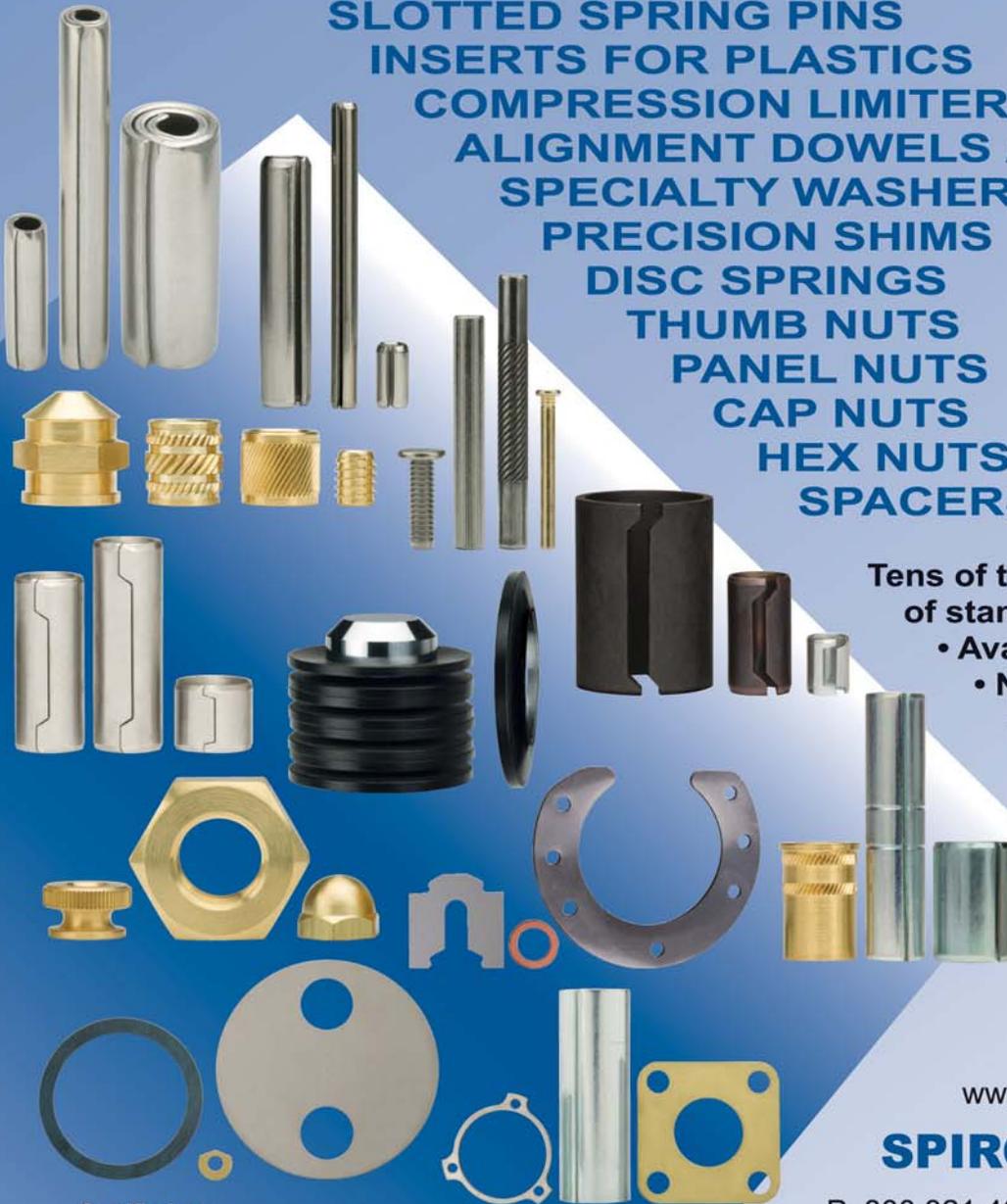


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by John Wachman Director of the Fastener Training Institute®

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We are proud of the fact that 100% of Fastener Training Institute students have indicated they would recommend the class they attended to others in the fastener industry.

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**Russ Doran, Timberline Fasteners**

"Furthering your fastener education is the best investment you can make in yourself and for your customers. Suppliers and distributors face many challenges in a competitive market, so having formal training in your craft will only help you gain that extra edge."

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*The core purpose of the Fastener Training Institute® is to enhance fastener use, reliability and safety. FTI is a division of the Pacific-West Fastener Association. For more information, visit [www.FastenerTraining.org](http://www.FastenerTraining.org) or contact Jeannine Christensen at 714-484-4747, or email [jchristensen@FastenerTraining.org](mailto:jchristensen@FastenerTraining.org).* 

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## 20 YEARS OF SERVING THE FASTENER INDUSTRY

For AEH (All Electronics Hardware, Inc.) 2013 marks 20 years of serving the vast fastener industry. AEH was founded in 1993 by long time fastener industry veteran, Ted Pavoris, with the idea of providing the industry with high quality competitively priced plastic parts that would fill both common everyday requirements as well as unique specialty plastic part applications or needs. These plastic parts were generally offered to the fastener distribution network and have since branched off into additional segments such as the electrical and electronics marketplaces as well.

From early on, Ted, and his organization placed a dedicated focus on providing excellence in design, manufacturing, and distribution fulfillment in a consistent effort to do "whatever it takes" to meet the needs and whenever possible exceed the expectations of its growing group of customers.

As Ted was joined by his son Darren Pavoris in 1995, they teamed up to evaluate the balance between tooling costs, part costs, anticipated sales/production volumes, long term goals, and expansion of product offerings. To help achieve these goals, AEH moved in the direction of segmented tooling. Tooling which is easily modified to provide multiple variations of the same or similar parts. Building this segmented tooling has addressed the ever present tooling cost component, but also in many cases has provided the added benefit of quick-to-market production and an economic way to introduce and/or expand products offered.

The majority of All Electronics Hardware sales are produced from proprietary tooling on which parts are run and manufactured right here in the USA. Our product offering has grown

tremendously as we continue to develop and enhance product categories such as: Edge Protection, Card Guides, LED Spacers, Component Insulators and End Caps, Rivets, Plastic Screws and Nuts, Spacers and Standoffs, Plastic Tubing, Electrical Terminals and Electrical Wire Connectors, as well as, the original core categories of Circuit Board Supports, Cable Ties and Accessories, Wire Routing Devices, Cable Clamps and Clips, Bumpers and Feet. You can find our product offering at [www.aehonline.com](http://www.aehonline.com).

AEH continues to welcome custom part opportunities relying upon many years of design and manufacturing experience to help bring practical product solutions to its customers.

As AEH has grown through challenging times they remain proudly dedicated to continuing the tradition of doing "whatever it takes" to meet the diverse needs of its growing group of global customers. Please plan to spend some time with Darren Pavoris and his associates at the Las Vegas Fastener Show – Booth # 1113. 



## DISTRIBUTOR NEWS

**Northern Wire**, a division of Elgin Fastener Group, is preparing a celebration to mark the 40th anniversary of the Company. Started in 1973,

Northern Wire began its operations as a manufacturer of wear-rods for snowmobile skis. Located in the Merrill Industrial Park since 1980, Northern Wire has grown into one of the leading privately held wire forming companies in the United States, serving industrial markets ranging from agricultural machinery, lawn & garden, and landscaping equipment to construction and recreational vehicles.

As an ISO 9001:2008 quality certified manufacturer, Northern Wire also offers machining, cold heading, and welding capabilities, in addition to operating its own plating facility.

Acquired in June 2012 by Elgin Fastener Group, Northern Wire is completing plans to host local and state officials on Monday, August 26, to help celebrate this milestone in the Company's history.

*If you would like more information about Northern Wire's products or services, contact one of their team members at PO Box 545, 1100 Taylor St., Merrill, WI. Tel: 715-536-9551, Email: [info@northernwire.com](mailto:info@northernwire.com) or visit their website at [www.northernwire.com](http://www.northernwire.com).*



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The Installation Screws are Large Round Washer Heads with an XL Type 17 point to make awkward driving easier to penetrate. The size range of this screw is # 10 x 2 1/2" - 4" and has a Zinc Finish.

*The full range is available in the online store at [www.quickscrews.com](http://www.quickscrews.com).*



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## FORGING THE "NEW" CARDINAL FASTENER

Even while Cardinal Fastener is in the midst of celebrating its 30th birthday, the company is busy reinventing itself to better serve industrial fastener distributors, now and in the future.

Founded in 1983, Cardinal Fastener is a leading U.S. manufacturer of large diameter hot forged fasteners, including hex bolts, heavy hex structural



bolts, socket head cap screws, square head and 12 point flange fasteners, hex flange, shoulder screws, studs, and specialty parts ranging from 1/2" to 3" dia. (M16 to M72 metric). Cardinal specializes in short lead time MRO requirements, offering on-demand cut threading of pre-forged blanks to achieve an unprecedented 97% on-time performance for same-day or next-day shipments. Cardinal also manufactures 'forged-to-order' fasteners in 3 to 5 business days utilizing in-house tooling and hundreds of stock dies, and has the capabilities and resources to be highly price competitive in larger runs.

To support fast turnaround, Cardinal stocks a large inventory of raw materials and forged blanks, including a new metric stocking program (8.8, 10.9 and 12.9). Cardinal products meet SAE, ASTM, and ISO standards, and encompass all grades of steel, plus high temperature alloys such as B16 and A286, 300 and 400 Series stainless, with exotics such as Monel, Inconel, and Hastelloy® available upon request. Cardinal also offers CNC machining capabilities to produce specialty fasteners.



### New Leadership for the "New" Cardinal

On March 18, 2013, fastener industry veteran Bill Boak was appointed as the company's new president, immediately transforming Cardinal into a more customer-focused organization. The company added several highly experienced inside sales representatives as well as two highly accomplished regional sales managers – Bill Walczak and Floyd Carr – to strengthen partnerships with key fastener distributors. A series of capital investments were also initiated to upgrade Cardinal's manufacturing and quality systems.

In 2010, Cardinal became the first U.S. hot forged fastener manufacturer to attain ISO 9001:2008 certification. The company employs a variety of manufacturing technologies, including single blow open die and two-stroke closed die hot forging presses, induction units with optical pyrometers, CNC turning centers, cut-threading and

roll-threading (before or after heat treating), as well as coating and plating to customer specifications.

With the added flexibility of two-stroke forging, CNC machining, and the



ability to work with exotic alloys, Cardinal is expanding into new markets with high strength structural bolts for heavy construction, mining, and oil and gas industries, as well as offering uniquely designed socket head cap screws.

*please turn to page 117*

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### FORGING THE "NEW" CARDINAL FASTENER *continued from page 115*



To ensure consistent product quality, Cardinal maintains full material traceability all the way back to the mill. The on-site A2LA accredited mechanical test lab ensures that all products meet or exceed ASTM, SAE, and ISO standards. In-house capabilities include full size tensile strength tests, as well as hardness tests, carburization, de-carburization, and magnetic particle inspection. Third-party Charpy testing is also available. All raw materials are subject to rigorous incoming inspections, including chemical analysis, with periodic vendor audits. Cardinal also ensures quality through Advanced Product Quality Planning

(APQP), and traceability through lot code stamping, as required.

#### *Lowering the Total Cost of Ownership*

Fastener distributors are demanding super competitive prices. Cardinal delivers with its significant buying power coupled with increased operational efficiencies to lower its prices. The company is also broadening its inventory of raw material and pre-forged blanks and is expanding its application engineering services to help customers achieve even greater cost savings. Cardinal will also be introducing value added services such as JIT and managed inventory programs to further reduce the total cost of ownership.

Fastener Distributors who visit Cardinal Fastener at NIFMSE booth #1212 in Las Vegas will not only join in Cardinal's 30th anniversary celebration, they will also get reintroduced to a dynamic new company that delivers superior quality fasteners quickly and price competitively. 

## ELGIN COMPANIES TO REMAIN SEPARATE; BUT WORK TOGETHER ON SALES & BILLING

After two high-profile company acquisitions this spring, Elgin Fastener Group LLC's CEO Jeff LITER has a clear goal: "Our strategy is to be the #1 domestic fastener manufacturer in the industrial space." The vehicles for reaching the top are both organic growth and more acquisitions, LITER said.

In March, Elgin announced the acquisition of Telefast Industries Inc. and the following month Vegas Fastener Manufacturing. In 2011, Elgin had acquired Silo Fasteners and Landreth Fasteners. In 2012, Quality Bolt and Northern Wire were added to their group of companies.

Elgin itself was acquired in August 2011 by the Boston-based private equity firm, Audax Group. Founded in 1999, Audax specializes in middle market companies.

Audax Group's acquisition of Elgin made Richard Hagan's Top Ten Fastener Acquisitions of 2011 list.

In an interview with GlobalFastenerNews.com LITER said Elgin is looking for more North American acquisitions and Vegas is a good example of what LITER is looking for.

"Buy and build" is the goal, he added.

Backed by Audax, Elgin has grown to \$125 million in annual sales and LITER hopes to double that by 2015.

The acquired companies will keep their names just as previous companies have. The acquired companies "have a very good history and reputation. That is important to keep. I want Telefast to be known as Telefast," LITER told FIN in pointing out the company's expertise in nuts.

In addition to the company names, he prefers management staff to stay. "It makes life easier," LITER acknowledged. But also those managers have been responsible for building the companies, LITER added.

For example, Telefast was founded in 1986 by Jeff Ferry and Kathleen Ferry. Both were from multi-generation fastener families.

Since Jeff Ferry died suddenly in 2002, Kathleen Ferry has continued to build the company. "Today Telefast has her fingerprints all over it," LITER said.

"There are numerous \$5 million to \$20 million companies," LITER said of possible acquisitions.

- U.S. manufacturers aren't the only U.S. focus for Elgin Fasteners. Most of the customers are domestic too. "Our market is 98% North America," LITER said. "That's our focus."

LITER finds customers are asking "more and more specifically for domestic materials too. We really believe

in U.S. manufacturing."

- What is Elgin selling? LITER told FIN that Elgin will emphasize the engineering in fasteners rather than treating all fasteners as Class C components. "We need to help customers understand the importance of fasteners," LITER explained.

"We want to be involved early" in the fastener selection process," he added.

LITER guesses that the importance of the fastener hasn't been emphasized enough because traditionally the industry has been so fragmented.

LITER has seen the engineering since acquiring Northern Wire. Though many people may not think of wire forms as "critical applications, they are indeed engineered products," LITER pointed out.

- Expect Elgin to be active in industry associations. "You owe it to the industry to be in the Industrial Fasteners Institute and the National Fastener Distributors Association," he said.

The Elgin companies will work together on "combining things that make sense," LITER said. But he notes that each company is different. The sales force will be trained on cross selling and advertising will be changed to emphasize what the expanded Elgin can provide to distributors. Billing can be reduced to one invoice to distributors from all the Elgin companies.

- Elgin's companies are in general already well-equipped with machinery, LITER noted.

The current and upcoming challenge is workers. Elgin has 700+ employees at eight locations, but the real shortage is for headermen. Elgin could hire eight to 10 skilled people today. LITER said Elgin Fasteners have begun "developing our own" headermen.

- LITER wants Elgin's fastener companies to be aggressive in adding capabilities, new products and moving into new markets.

Known as a watchmaker when Chicago-based Elgin National Industries entered the fastener business in 1987 with the \$17 million acquisition several manufacturers and a distributorship from Nortek – including Chandler Products and Ohio Rod Products

Elgin's current U.S. fastener companies are: Chandler Products, Quality Bolt & Screw, Ohio Rod Products, Leland Powell Fasteners, Silo Fasteners, Landreth Fastener, Northern Wire, Best Metal Finishing, Vegas Fastener Manufacturing and Telefast Industries. 

## DISTRIBUTOR NEWS

In support of the continuing education efforts within the fastener industry, the **Telefast Industries** division of the Elgin Fastener Group (EFG) served as a tour site host for the recent Fastener Training Week program held in Cleveland, OH.



Sponsored jointly by the Fastener Training Institute® (FTI) and the Industrial Fasteners Institute (IFI), Fastener Training Week is an intensive version of the acclaimed FTI Certified Fastener Specialist™ advanced technical training program. The week long program offers fastener distributors and manufacturers instruction on manufacturing processes, consensus standards, and quality control. The accompanying photos show program attendees and Telefast Industries personnel touring the Telefast manufacturing facility in Berea on July 24th.

Elgin Fastener Group actively participates in many events designed to further the education of current and future generations of fastener professionals, ranging from programs and events sponsored by FTI and IFI, to classroom instruction, plant tours and lunch-n-learns provided by our various manufacturing divisions. Contact us today to learn how our efforts in these areas can benefit you.

For more information, call EFG on 812-689-8917 or go to [www.elginfasteners.com](http://www.elginfasteners.com)

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## **McGLADREY/NAW INSTITUTE SURVEY SHOWS DISTRIBUTORS CONCERNED OVER POLITICAL INDECISION AND UNCERTAINTY OVER NEW REGULATIONS**

Uncertainty about government regulation and its impact on business growth has become a top concern of executives in the wholesale distribution industry, according to results from the 2013 McGladrey/NAW Institute Distribution Monitor. The survey was sponsored by McGladrey LLP, the nation's leading provider of assurance, tax and consulting services focused on the middle market, and the NAW Institute for Distribution Excellence, the long-range research arm of the National Association of Wholesaler-Distributors (NAW).

According to this year's survey results, distribution executives have positive outlooks for the near future, with 87 percent reporting that they are optimistic about their own business' growth prospects in the coming year, and 75 percent reporting optimism for the whole ale distribution industry in general. Sixty-three percent of executives also said they expect to add jobs in the next 12 months, with an average expected increase of 4.4 percent.

Despite these positive outlooks, survey respondents indicated that they expect their growth to be limited by a variety of issues. While these executives remain somewhat concerned about traditional business factors like materials pricing and the direction of the economy, the top four (out of 17) most commonly cited threats to growth were related to government policy. Government regulation (72 percent) and health reform implementation (72 percent) were tied for the most commonly cited threats to growth, while with the increase in payroll taxes for Social Security and Medicare (71 percent), and the federal deficit (69 percent) close behind.

"Wholesale distribution companies are growing, and the vast majority expects to continue growing in the coming year," said Patrick Larmon, Bunzl Distribution USA, Inc. and 2013 NAW Chairman of the Board.

"However, these results demonstrate that distributors still face headwinds on the path to growth, and many of them can be traced back to Washington. Uncertainty about government regulation and the impact of policies like health reform have become a major challenge for these executives."

While hiring is expected to increase, most distribution executives expect a variety of employee costs to increase substantially in the next 12 months. In particular, while wages and other benefits are expected to increase at an average rate of around four percent; executives expect

health care costs to rise by an average of 11 percent.

Distributors are also anticipating significant increases in materials and components costs, and in several areas, concern about these costs is on the rise. Ninety-two percent of executives expect increases in transportation/fuel costs, compared to 77 percent in 2012; 84 percent of executives expect increases in energy/utilities costs in 2013 (an average of 4.5 percent), compared to 70 percent in 2012; and 83 percent of executives expect increases in costs of inventory/materials/components in 2013, compared to 73 percent in 2012.

Distribution executives are increasingly aware of the risks associated with business information and data, though they continue to report relatively low levels of risk. Approximately 70 percent of distribution executives report that their information/data is at little or no risk, a drop from 79 percent in 2012. At the same time, distributors are taking steps to manage IT-related risks, with 62 percent of distributors reporting that they have an IT risk management process, and 72 percent indicating that they regularly monitor systems to find threats and attacks that might have occurred.

"Since the Monitor began accumulating data in 2005, the management of thriving companies has been a topic of interest, said Bob Jirsa, partner – assurance services and industrial products, distribution for McGladrey.

"Over the years, the survey results have made it clear that successful distributors are investing in their futures and are more likely than others to put a percentage of their revenue in a number of areas, including continuous improvement, training and productivity, information technology, measurement procurement, acquisitions, and international expansion and exporting." 

The McGladrey/NAW Institute Distribution Monitor surveys industry leaders to assess the current state of the industry and to determine what steps CEOs, CFOs and other executives are taking to grow their businesses and stay competitive. All data is collected online in response to invitations from McGladrey.

The NAW Institute for Distribution Excellence is the research arm of the National Association of Wholesaler-Distributors (NAW), Washington, D.C. NAW is composed of direct member companies and a federation of international, national, regional, state and local associations and their member companies, which collectively total more than 40,000 firms. The NAW Institute for Distribution Excellence sponsors and disseminates research into strategic management issues affecting the wholesale distribution industry. The NAW Institute aims to help merchant wholesaler-distributors remain the most effective and efficient channel in distribution.

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## WOMEN IN THE FASTENER INDUSTRY

# WIFI: CONTINUING TO MAKE AN IMPACT IN THE FASTENER INDUSTRY

### WIFI at NIFSME Vegas

"Making an Impact in the Fastener Industry" is the theme for a dynamic panel featuring industry professionals at the 4th Annual WIFI Speakers Series and Networking Event to be held at 2 p.m. on Oct. 23, 2013, at the NIFSME Expo in Las Vegas.

The panel will be moderated by Jennifer Friel, President of Mid-West Fabricating Company, and will bring together the most forward-thinking fastener professionals to discuss the leading edge of the evolving industry landscape.



### The distinguished panel will feature:

#### Importing

Simmi Sakhuja,  
owner, Stelfast Inc.



#### Distribution

Shawna Clark, president,  
Big Red Fasteners



#### Importing/Distribution

Janet Schiopota,  
Sr. Manager/Procurement,  
Great Lakes Fasteners



#### Manufacturer's Rep

Beth Van Zandt,  
Desert Distribution



The event will begin and end with a networking session and feature a raffle that will benefit WIFI scholarship funds. WIFI will also be present at the Expo in Booth 1504. Applications for membership and scholarship opportunities will be available.

### WIFI Scholarship

Women in the Fastener Industry recently awarded the Edith Cameron Scholarship to Jill Shackelford of Porteous Fastener Company. Shackelford works in inside sales for Porteous in the Dallas-Fort Worth area and previously worked for Heads and Threads.



The scholarship will allow Shackelford to attend the National Industrial Fastener & Mill Supply Expo in October and participate in the 4th Annual WIFI Speaker Series and Networking Event.

"The scholarship will give me the chance to attend the Expo and to strengthen my customer relationships, both personally and professionally," said Shackelford.

"I feel it is important to gain knowledge by networking and sharing experiences with other colleagues, especially women."

**For more information about WIFI, scholarships or events, visit the website at [www.fastenerwomen.com](http://www.fastenerwomen.com).** 



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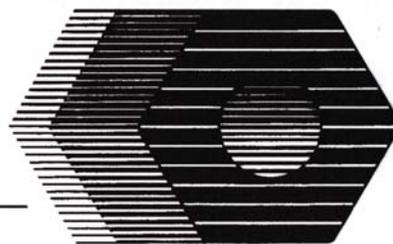


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When engineers design equipment there are many factors that they consider and one of the most important is the assembly of all of the components. Retaining rings are used in many cases because of the time that is saved when manufacturing their assembly. The designers will not use cotter pins (since they need a drilled hole), nuts, lock washers, flat washers, threaded rods, or machined shoulders. All of these items are costly. Retaining rings are used to replace all of the old-fashioned costly items.

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All you need is a groove, either on a shaft or inside a bore, and the size will depend on your application. There are various application tools available to assist you that can be specifically designed for your needs.

1. The handheld applicator is the most common tool and is used with all XC, XE, XEB, XED, XER, XEX, XEY, XK, and XKT style retaining rings. The handheld applicator is typically used with a dispenser and both are made

specifically for the ring used in the assembly.

2. The ring insertion gun (RIG) is used with XC, XE, XEB, XED, XER, XEX, XEY, XK, and XKT style retaining rings that are tape stacked. This tool is recommended for applications where the ring is used to lock the component

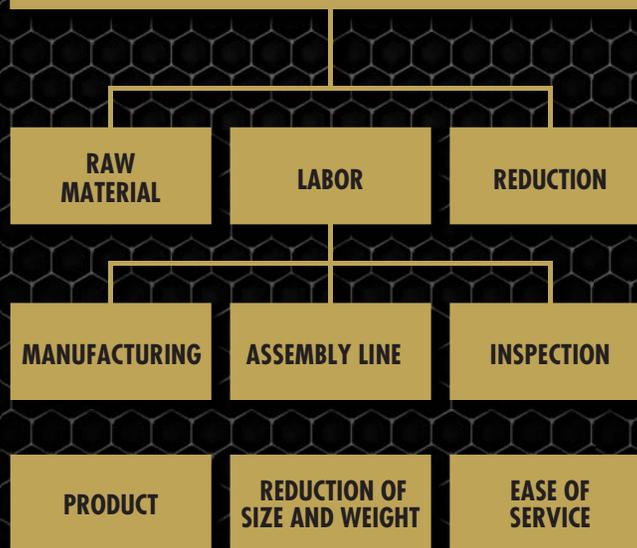
under tension and is also ideal for use on assemblies that may be too large to bring to an assembly line.

3. The ring insertion dispenser (RID) is a tool that can be used with smaller XC, XE, and XER style retaining rings which do not require much force to insert into a groove. The RID is recommended for applications where the clearance dimensions would prohibit placing a

tool over the assembly in an axial direction.

4. For certain applications where production speed and risk of employee injury are a concern, an automated insertion tool may be a practical option. S&M Retaining Rings is proud to offer our stationary ring insertion tool (SRIT), which uses pneumatic pressure to apply the XC, XE, XEB, XED, XER, XEX, XEY, XK, or XKT rings and can be customized based on a customer's application needs. 

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## DISTRIBUTOR NEWS

Celebrating Trinity's 10th anniversary, **Trinity Hardware Headquarters** is launching its new ecommerce web site to provide fastener buyers an online buying process to browse online with ease. Their new web site, debuting this fall, will offer online ordering and secured credit card transactions. Customers will be able to place orders online 24 hours a day and will have access to online pricing and stock availability. Day or night, Trinity is here to accommodate your hectic schedule with convenient online ordering.

In conjunction with the debut of their new ecommerce site, Trinity Hardware Headquarters is releasing its latest catalog. The 600 page catalog introduces Trinity's newest line- a complete range of KMC clips and clamps. The catalog also features the new "Grade 8" Threaded Rod and Acme Nuts as well as the largest inventory of #7 Head Bucket Tooth Plow Bolts in America.

Customers will be able to shop for industrial fasteners by category in product group offerings, look up part numbers, check stock, place orders, track orders, and reprint invoices and packing lists.

Trinity's multiple distribution centers across North America allows shipping to the majority of the United States within one to two days utilizing its ERP Oracle operating system. Trinity is ISO 9001:2008 registered and has a rich history of experience and management in the fastener industry. Trinity has created a business strategy that provides world class customer service so customers can focus their resources on their primary tasks and improving the bottom line.

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## DISTRIBUTOR NEWS

**Stelfast Inc. (Canada)**, is pleased to announce the hire of Mike Tian as Quality Engineer.

Mike holds a Masters Degree in mechanical Engineering from the University of Western Ontario. He has worked as Quality Manager and Quality Engineer in the past and has extensive experience in managing quality systems including ISO9001, ISO/TS16949 and AS 9100.

Stelfast Inc. is an Importer/Master Distributor of fasteners with branches in; Atlanta, Chicago, Cleveland, Dallas, Houston, Los Angeles, New Jersey, Toronto and Montreal. Stelfast Inc. supplies both imported and domestic material. Stelfast Inc. offers over 12,000 SKU fastener products direct from stock and specializes in per print, PPAP & stock and release programs.

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# Dyson Introduces UnitPac

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Now Dyson has created, exclusively for fastener distributors, UnitPac, a domestically manufactured bolt and nut assembly provided as a package and ready to ship via Dyson's rapid response service. UnitPac will meet distributors' need to find a particular domestic combination when quick delivery is paramount. The UnitPac inventory has been established for common bolt head styles and grades and is available in diameters from 1 1/4" through 2 1/2".

Dyson also offers a wide variety of bolt and screw head shapes in diameters from 1/2" to 8", with metric sizes



*Dyson has extensive quality control and quality assurance programs.*

starting at 20mm. Matching nuts are available, including Dyson's Patented D-LOC® Locking Nut System.

Dyson maintains a large inventory of raw bar in materials ranging from standard carbon and alloys to nickel alloys, stainless grades and other exotics. Combined with its state-of-the-art machine shop that can hold tolerances to .001", Dyson can provide

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## DISTRIBUTOR NEWS

Engineering students taking part in the Formula Student racing car project at the University of Liverpool have benefitted from a donation of several torsion springs from **Lee Spring UK**.

Formula Student is an international competition that sees student led teams around the world design, build, and race single seat racing cars.

The University of Liverpool Motorsport team consists mostly of students working towards their Masters degree in Engineering.

“Lee Spring supplied torsion springs that are positioned in the pedal box assembly in the 2012 car, ULM007, and are used to return the pedals to position.” said Thomas Galea, ULM Team Member, in his second year of study in Mechanical Engineering at the University of Liverpool. “They are absolutely perfect for what we need.”

Torsion springs are used for hinges,



counterbalances and lever return applications and are commonly found in swing-down tailgates, garage doors and even clothes pins. The torsion springs supplied are ideal for this application and are standard Stock Springs featured in the Lee Spring catalog.

“The team relies on the support and generosity of our sponsors to compete in national and international competitions and we are very

grateful for the springs and the support from Lee Spring.” Thomas Galea adds.

Liverpool University Formula Student team competes in the UK at Silverstone and internationally. In 2012 the team placed 4th in the UK Universities competition held at Silverstone, including a 1st place win in one of the events.

For more information or to request the latest catalog, call 1-888 SPRINGS or visit [www.leespring.com](http://www.leespring.com).

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- SHEET METAL SCREWS**



**PAGE 134 IS NEXT...**

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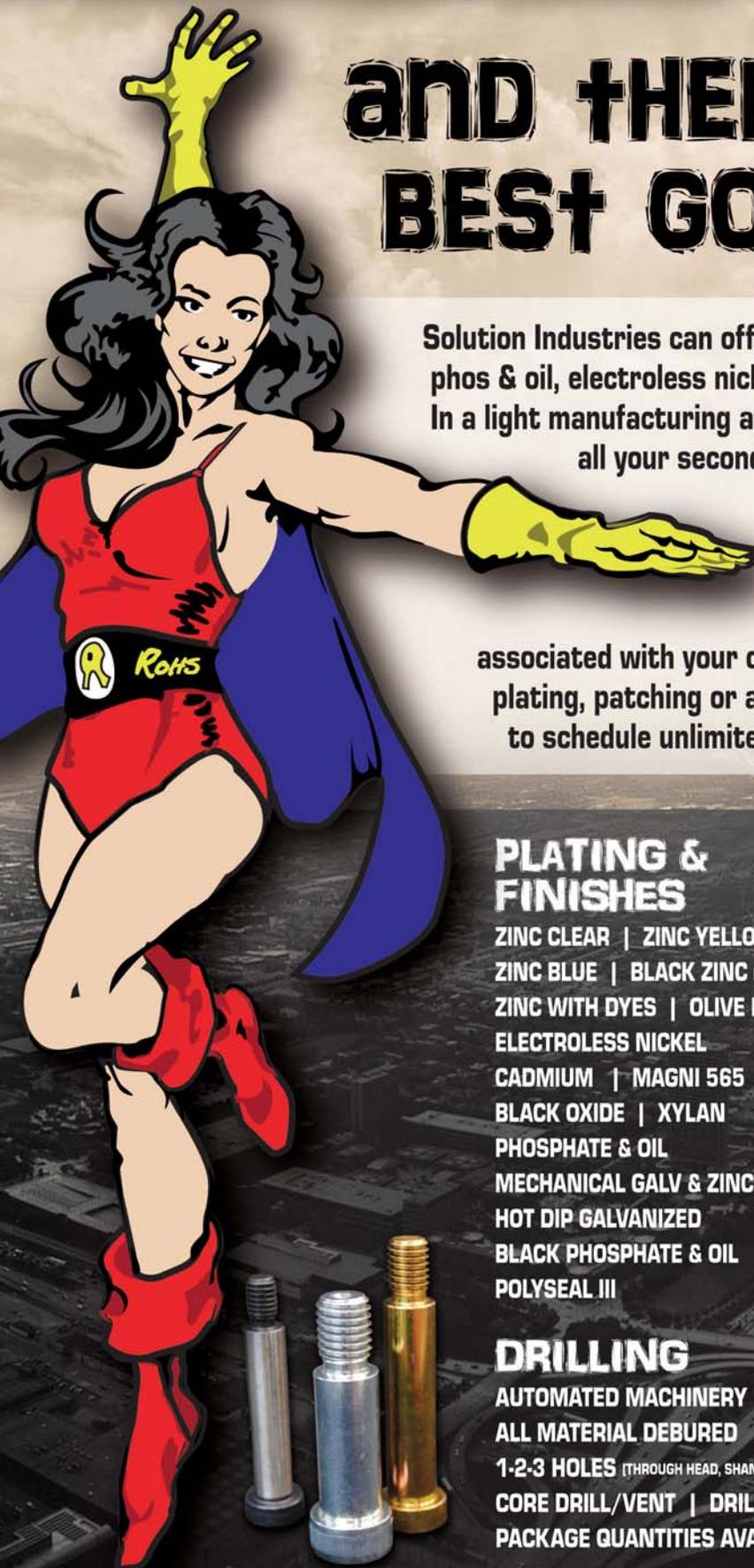
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**THE END IS ON PAGE 136...**

## DISTRIBUTOR NEWS

**Akro-Mils**, a North American leader in the storage, organization and transportation products, introduces its new TiltView® Stack Carts - a mobile storage and transport solution for small parts and supplies utilizing Akro-Mils' TiltView tilting bin system.

Combining both the efficiency of tilting bins with the versatility of a mobile cart, TiltView Stack Carts feature a workheight top for added workspace.

Carts come with two 06703 (3-Bin), four 06704 (4-Bin), and two 06705 (5-Bin) TiltView bins. Handles are located at each end of the cart for transport convenience. Padded corner bumpers keep the cart safe from damage. Locking, non-marking, thermo-plastic rubber casters allow for efficient movement in any environment. Constructed of 16-gauge steel, TiltView Stack Carts have a weight capacity of 250 lbs. Ships fully assembled!

Available in six sizes, TiltView Bins offer users an expandable, high-density storage system.

For more information on TiltView Stack Carts and TiltView Bins contact Akro-Mils at 1-800-253-2467, Fax: 330-761-6348, or visit the company's award-winning website at [www.akro-mils.com](http://www.akro-mils.com).

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## DISTRIBUTOR NEWS

**Stelfast Inc.**, a leading importer of fasteners, is pleased to announce the hires of Don Carr as Southwest Regional Manager and Mike Hall as Western Regional Sales.

Don Carr has served as Branch Manager, Sales Manager and Regional Sales Manager in the past and brings over 15 years of fastener experience. Additionally, he has just completed a five year term as a Board Member with the Southwestern Fastener Association.

Mike Hall brings more than 10 years of fastener industry experience. He holds a great deal of knowledge and has a proven track record of fostering strong customer relationships.

For further information on Stelfast's products and services, call them toll-free at 1-800-729-9779 or visit their website at [www.stelfast.com](http://www.stelfast.com).

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TO THE MANAGEMENT:

As you all know, an integral part of Solution Industries' ongoing success has been our ability to think "outside of the box." When all others are going left, we go right, when others pull back, we push harder...quite simply, when others zig, we zag...

We are always looking for "A" players within the industry with which to make ourselves stronger. We do this because we believe that the most successful companies have the better, more committed players in their team - successful people bring successful results.

With this in mind, we are excited about 2014 and beyond. Major things are happening here at Solution Industries....we are about to ZAG! First on the agenda is the upcoming opening of our FIRST BRANCH LOCATION IN CHICAGO. They call it the Windy City, but watch out, we're going to blow a storm through there! The details of which are currently highly classified but we can reveal at this time that once finalized, the leader of the operation will be Mr. Kelly Poholarz, a 15+ year fastener veteran. Vital to this venture is his ability to help open the Chicago market up to us and expand our efforts to become more efficient, more successful and more of a factor from coast to coast. This venture into a new market is just the tip of the iceberg for what will become a great year.

Pivotal to our ongoing success, the management here at Solution Industries welcomes the talents of Mr. Frank DiVito to the growing team. Frank is another 15+ year veteran and his experience, contacts and skill sets will certainly expand our Cleveland and east coast market.

To all those concerned, the details of the larger scale plan will be released in due course. Please notify your team of the exciting upcoming changes, everyone else is on a strictly NEED TO KNOW BASIS only. Thank you in advance for your discretion.

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head-up screws and slowly built our inventory to help service distributors nationwide," John

of fastener knowledge.

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## COMPONENTS FOR INDUSTRY IS ALL ABOUT PARTNERSHIP

Kevin Christie, CEO of Components for Industry (CFI) Sums up their philosophy in one word: He says, "Partnership-It's as simple as that." He explains, "We are dedicated to finding better ways to serve our customers - our partners. It's our job as component management specialists to analyze your parts, usage, and prices in order to find improved methods of procurement and flow of materials."

### Vendor Base of One

CFI has a "Vendor Base of One" concept which aids in achieving this goal. Through their expansive resources and market knowledge, they are dedicated to providing their customers with the most preferred methods of component acquisition and logistics. After all, that's their job as their customers' partner.

### Proprietary Technologies and Engineering

In order to fulfill their commitment as part of their partnership, they go the extra mile in every area. Not only are they an extremely reliable supplier, they also develop problem solving technologies and methodologies that make them invaluable to their customers. A few stand out capabilities include the following:

#### QUALIFORMING

Qualiforming® is a process utilizing Cold Form Isolation Technology developed by Kevin Christie, CEO of CFI for the requirements of specific customers within the

automotive industry.

It was developed with the express goal of attaining screw machine-like quality and consistency without the cost and delays associated with that process. It was specifically designed for those OEMs that require strict quality adherence, tight tolerance, high volume production, and cost containment.

#### C-COAT™ SYSTEM

As a result of a request from a customer, CFI researched improved coatings for fasteners being welded.



Strategic meetings with CFI engineers, chemical engineers and metallurgist resulted in the development and implementation of the CFI C-Coat™ system. C-Coat™ provides parts that are corrosion resistant, oil free, and have an additive that has proven to increase weld strength by, in some instances, over 4 times that of competitive coatings.

In addition, C-Coat™ acts as a paint primer, is water soluble, and is completely environmentally friendly. For complete application control, CFI applies C-Coat™ at its facility in Mundelein, IL. C-Coat™ is commonly applied to:

- Weld Nuts
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Continued on page 260



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## NORTH COAST FASTENER ASSOCIATION

# THE NCFA IS STILL GOING STRONG!

### *2013 Distributor Social Biggest One Yet!* by Marty Nolan, NCFA President

The 2013 North Coast Fastener Association's (NCFA) Distributor Social was the biggest one yet with approximately 250 people in attendance! It started off with an outstanding Panel Discussion followed by a night of networking and socializing. The topic of this year's Panel Discussion was "Challenges of the Current Fastener Business Climate" and the panel included Simmi Sakhuja (Stelfast, Inc.), Bob Fawcett



**the social** (Nucor), Dan Zehnder (Trinity Logistics), Don Shan (Solution Industries) and Steve Andrasik (Brighton Best). The moderator for the discussion was Eric Dudas of Fully Threaded Radio. A special "thank you" to our panel speakers and moderator for taking the time to participate in the panel discussion.

This was the 5th year the NCFA has hosted the Distributor Social, with attendance growing each year. Plans are already underway for the 2014 NCFA Distributor Social, with tours and open houses being determined. This event has been noticed by other regional fastener associations and has become one of our best attended and most popular events.

Many thanks to all the suppliers who support the event and the distributors who take the time to attend.

### *NCFA Night at the Races and George Hunt III Hall of Fame Induction* by Kelly Quittenton, NCFA Vice President

The North Coast Fastener Association is a very close group of hard working fastener industry people. It has certainly been a pleasure going to all the NCFA events through the years. It seems that people within this industry

really enjoy networking and coming together to support each other.

The most recent event the NCFA hosted shows this loyalty and support within our network of friends. On June 21st, we held our annual Night at the Races at Northfield Park in Northfield, OH.

This social event that has become an NCFA tradition! What made it even more special this year, is the surprise induction of Mr. George Hunt III of Brighton Best International into the North Coast Fastener Association's Hall of Fame. The NCFA Board was

able to pull off this surprise without George finding out and it was a complete shock to George!

We couldn't be more excited to announce this honor. George has dedicated years of volunteer work into the NCFA. George's hard work and dedication to the association is appreciated by all current and past board members. George joined the board in 2008, holding a trustee position. His second year, he became President and held this position for a total of 3 years. He continued



on the board as a trustee, passing the torch to other folks within this industry.

Although he is currently not on the board, he continuously calls members of the association to check in with them. George always

wants to make sure he is still supporting the association as much as possible. George is a great person, giving all his dedication to those he cares about and his career within the fastener industry. His work ethic and passion stands alone! It is certainly our pleasure to announce George's induction into the North Coast Fastener Association's Hall of Fame. Congratulations George!

For more information on the North Coast Fastener Association or our upcoming events, please visit our website [www.ncfaonline.com](http://www.ncfaonline.com). 

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**FASTENER TERMINOLOGY & DEFINITIONS** *continued from page 8*

On the horizontal axis (x) of the diagram we can plot the elastic and plastic stretching expressed as  $\Delta L$ . As long as the ratio between the applied force and the stretching is to the left of the proportional line representing the elastic modulus (E-modulus) there is no permanent damage or change of the part. If we remove the force, the fastener simply goes back to its original length. In this context  $\Delta L$  is normally given as  $\mu\text{m}$  (micrometer) or  $\mu\text{in}$  (micro inch).

We can now identify a few common and useful terms that are very important from both quality (testing) and design aspects:

### ***Proof load***

By applying a specified (a “book value”) tensile load to a fastener sample lot and then check that no permanent elongation ( $\Delta L$ ) has occurred, we will know if the manufactured lot meets this requirement. That means that it will be on the left side of the E-modulus line in the graph (Figure 1). The proof loads specified in ISO 898/1, ASTM 449 and SAE J429 have been positioned at approximately 90 % of the expected nominal yield strength of the fasteners. Proof loads are absolute values used to verify a lot, not min/max levels. This is, in my opinion, one of the most useful types of fastener testing, since it will also indicate to a joint designer the load level which should not be exceeded at assembly or in service. In fact, the proof load level should be the most logic starting point for a joint design, but then we must additionally also factor in all the variables in tightening, lubrication, external loads and directions, vibrations, etc. In some out-dated (still used by some educators) text books we find recommendations about designing on a percentage of yield, but it is far better to start at an absolute value rather than a nominal value with a min/max range. For some simple, lower grade/class fasteners the proof load test is sometimes replaced by a hardness test.

### ***Rp0.2 or Yield***

When a fastener has reached its maximum elastic limit it will start to permanently stretch (yield) due to plastic, non-linear, deformation. Depending on the

property class (metric) or grade (inch) this will, of course, happen at different load levels. As we can see from our graph everything is proportional until the curves start to develop when we reach the point of yielding for the various strength levels.

Starting with the lowest strength class 4.6 (Grade 1) it will start yielding at about 240 MPa or 36 000 PSI. The standards call out the lower yield since the “soft” material behavior due to stress causes an internal “slipping” before it, sort of, stabilizes to a measurable level. From this point we have a non-linear development advancing toward the highest stress level  $T$  = tensile strength. The load is increasing to this point, but the stretching is proportionally larger. We also notice a beginning contraction or “necking down” in the fastener body (likely in the threaded portion). From point  $T$  the fastener continue to stretch, but because of the contraction the cross sectional area is getting smaller and it requires less stress to continue elongation. Finally, the fastener fractures into two pieces.

Let’s go up to a higher strength level and look at class 8.8 (Grade 5). We now have a much stronger material due to both chemistry and heat treatment (quench and temper). The yield characteristic is now quite different. There is a gradual change from the E-modulus line to a non-linear curve. It is not practical to put a number to where the yielding actually started so we have instead a proportionality factor,  $Rp0.2$ , to define yield. When a permanent elongation is 0.2% of the gage length (we must use a machined specimen to do this, not the fastener itself) it is the definition of yield. It is called “Stress at 0.2 % non-proportional elongation,  $Rp0.2$ ” in ISO 898/1 (soon to replace all other “metric” specifications for mechanical properties). The higher strength levels 10.9 and 12.9 are following the same rules. SAE grades 1, 5 and 8 are listed next to the metric equivalents.

It is easy to realize that the proof load approach is a lot more simple, economical and practical than having to machine test pieces from standard fasteners. For QC work we must, of course, check tensile, proof, hardness and many other things, for joint design it is primarily the proof load that is of importance.

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### FASTENER TERMINOLOGY & DEFINITIONS *continued from page 142*

#### *Tensile strength*

According to ASME B18.12, tensile strength is defined as “the maximum tension-applied load a fastener can support prior to or coincident with its fracture”. Unless a fastener is extremely brittle, the fracture will happen after the maximum load has been applied and some contraction is evident. This is also illustrated by the curves in the graph. The testing for tensile strength is typically combined with a wedge test to make sure that the subsequent failure is in the shaft or threaded portion and not in the head-shaft junction. For an engineer to use tensile strength as part of design work is like playing Russian roulette.

There are a few other terms that we “kick around” in connection with fasteners, but the two following are related to joint work and only indirectly fastener terms.

#### *Pre-load*

When we assemble a bolted/screwed joint, we use the fastener to hold the joint parts together with a predetermined force. This is called pre-load, which is the

load level before the joint is in actual use. The pre-load is calculated based primarily on the external loads acting on the joint, the strength of the fastener, the properties of the joint materials and the method and accuracy of the tightening. The pre-load force level should, in the vast majority of cases, not cause the fastener to yield but to remain in the elastic region.

#### *Clamp-load*

All bolted/screwed joint will not retain all of the initial pre-load but will relax to some degree. The amount of relaxation (load loss) will vary depending on surface conditions, external load directions and the number of interfaces (joint parts). To properly design a joint, this relaxation must be taken into account (good estimation or testing) in such a way that the joint will be holding up in service even with a lower residual clamping. Because of some joint relaxation, the actual load in the fasteners will likely be lower than at the initial assembly, resulting in an increased safety factor. 

# FASTENER CROSSWORD PUZZLE

Test Your Knowledge!

**ACROSS**

1. Fastener's top
5. \_\_\_ saw
9. Bolt type
13. \_\_\_ toast
14. Christmas tunes
16. Long-time teacher's protection
18. Coasted along the runway
19. Soothsayer
20. Bureaucratic hassle
22. Gas stations
23. Foot digit
24. Topeka's place: abbr.
25. FedEx rival
26. M quartered
27. Public disturbance
28. Soprano Gluck and others
30. Pompous fool
31. Fight results, for short
32. Univ. in Tempe
33. Big name in caulking
35. NNW plus 180°
36. Promos
37. Lariat
38. Overly proper one
40. Song division
42. Officeholders
43. Electrician with a wire cutter, often
45. Hawaiian feasts
46. Military branch: abbr.
48. Security police of the old USSR
51. Sherwin-Williams or Rust-Oleum
52. Heads of high button rivets
54. Doing nothing
55. Actor Wallach
56. Jillian & Landers
57. Chewed with the front teeth
58. Young horse
59. Roll of money
60. Years lived
61. Unusual
62. Depot: abbr.
64. Ms. Gardner
65. \_\_\_ head; flat fastener top
66. TV brand
67. Urbanite on a ranch
68. Shout of joy
70. In the past
72. Suffix for eight or Hallow

73. "\_\_\_ You Babe"
74. Four pecks
75. Factions
76. Cushion
77. Unused
78. Aspire toward
79. Warmth
81. Lively dance
83. Clothe with royal vestments
85. Containing nothing
86. Approaches
88. Allow
89. Mrs., in Mexico
91. Digital camera batteries
92. Shade tree
95. Most popular baby girl's name for 2008
96. Likely
97. Relinquished
99. Busy as \_\_\_
100. \_\_\_ Tin Tin
101. Geisha's sash
102. Continent: abbr.
104. Barker and Bell
105. Push
106. \_\_\_ thread; one with an uneven crest
108. Type of pin
110. Threaded cone point
111. Begins

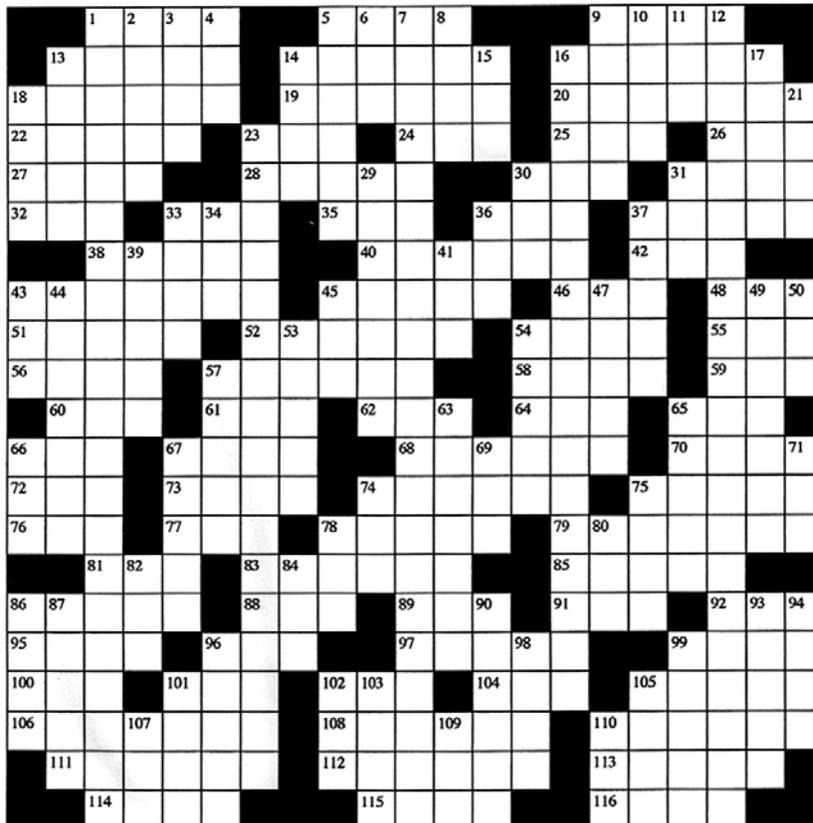
112. Joyce of "Three's Company"
113. Fill with joy
114. Red and Dead
115. Words on a sale tag
116. Curtain holders

**DOWN**

1. Three types of bolt accompaniments
2. Poet T. S. \_\_\_
3. Lincoln and Vigoda
4. Papa
5. Groups of wives
6. \_\_\_ pro nobis; pray for us
7. Three types of threaded fasteners
8. "Queen of Jazz"
9. Summons with a pager
10. Rivet shank extremities
11. Prevailing-torque \_\_\_
12. Three types of threaded fasteners
13. Baseball's Roger \_\_\_
14. Groovy, to a kid today

15. McCain's title: abbr.
16. Two types of fastener bearing surfaces
17. Florida tourist attraction
18. Skater Lipinski
21. Actress Lanchester
23. Two fastener types
29. Guarantees
30. Tool with a curved blade
31. Common metal
33. \_\_\_ tape
34. Lemony drink
36. Response: abbr.
37. Cooper or tinner
39. Dishwasher cycle
41. Eur. nation
43. Jacuzzi
44. Cure-all
45. Near the ground
47. Relieve; lessen
49. Quick looks
50. eBay offer
53. Academy pupil
54. "See if \_\_\_!"
57. Fastener surface indentation
63. Stern; severe

65. Chamfer or pinch
66. Congressman: abbr.
67. Small car dents
69. Greek letter
71. Suffix for count or host
74. Short life history
75. Cans of fuel additive
78. \_\_\_ Linkletter
80. Tumor ending
82. Tax-deferred acct.
84. Fisherman's item
86. Geek
87. Foreign rulers
90. Fesses up
93. Embankment
94. Encounter
96. Assists in crime
98. Orient
99. Mr. Rashad
101. Pod vegetable
102. Monogram for author Doyle
103. Jumping insect
105. Farm building
107. No, in Scotland
109. Caesar's seven
110. Eur. language



Solution on Page 252



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## MID-WEST FASTENER ASSOCIATION

# 61st GOLF OUTING SNEAKS IN BETWEEN RAINS

The MWFA held their annual Golf Outing, at Eaglewood Golf Resort, on June 27th. With this being a rainy summer, we were fortunate enough to have a day that was perfect weather, well until 5:00. By the time the storm passed through the golfers had finished 80% of their day. The tournament was called and the air conditioned inside was welcome. The event was successful in creating great networking, a great social atmosphere and raising funds for our Education & Scholarship programs through the raffles and silent auction. Congratulations to the top two teams:

**First Place:** Tom Bigott and Amy Sachs (XL Screw Corp.) Scott Young (Fasco) and Joe Clark (Komar Screw)

**Second Place:** Rich Cavoto (Metric & Multistandard), Dave Wendt (Wurth Adams), Bob Baer and Jim Sullivan (both Abbott-Interfast)

### Congratulations to our contest winners:

Dave Wendt  
Brad Jackson  
Rosi Thornton  
Todd Lindberg  
Bryan Geisner  
Mike Stamm  
Tim Presley  
Rich O'Boyle  
Ray Wood  
Phil Truss  
Stan Valle  
Josh Schuman  
Steve Rogalla  
Rico Mugnaini  
Scott Young  
Nate Skrzypchak  
Ray Vogel  
Ray Wood  
George Zerante  
Kevin Voigt

If not for the generosity of our many sponsors, we would not have as many contests allowing so many winners. This event's success was enhanced by our sponsors and we thank all of them for their support.

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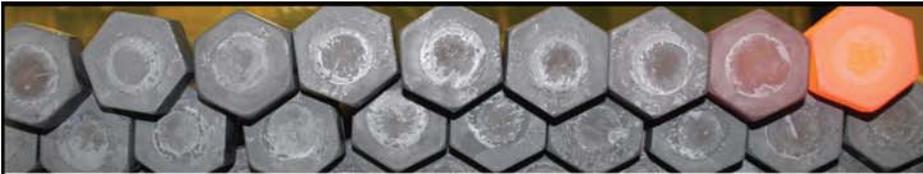


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**DISTRIBUTOR NEWS**

**STS Tectorius™** is pleased to present VIBRA-STOP™ thread locker, sealant and anti-vibration compound as an aerosol spray.

VIBRA-STOP overcomes traditional roadblocks that prevent thread-lockers from being packaged in spray applicators. Curing limitations and instability barriers have been eliminated with the VIBRA-STOP aerosol spray, further extending the vast capabilities of this unique product.

The original brush grade and high temperature version remain available for purchase. VIBRA-STOP product differs from other thread-locking compounds in a variety of ways: [1] Coated pieces can be removed and reused multiple times. [2] Installation can occur immediately OR indefinitely after application of VIBRA-STOP. [3] The formula is effective on metallic and non-metallic surfaces, and works on both threaded and non-threaded fasteners.

Operations Director, William Mackowski, "Applications where this product can save time and money for manufacturing and assembly can be found in any facility. Potential users need only to think out of the box and evaluate how their operations could benefit if they were freed from the limitations of traditional anaerobic products."

For more information, contact STS Tectorius at 586-232-3999 or visit our website at [www.tectorius.com](http://www.tectorius.com).

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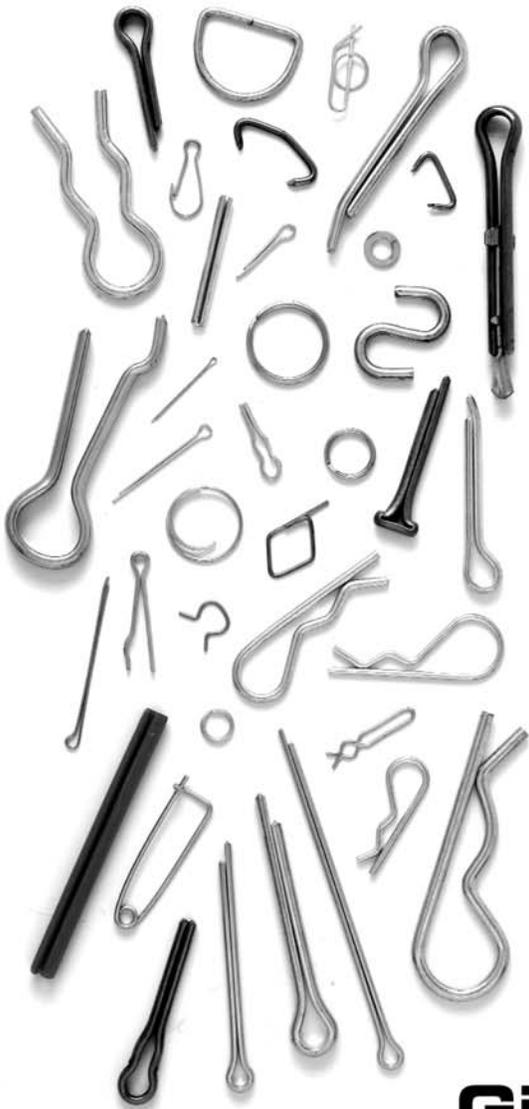
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## PACIFIC-WEST FASTENER ASSOCIATION

# COME TO THE LAS VEGAS SHOW AND LEARN “HOW TO CREATE A SALES PROCESS FOR YOUR FASTENER BUSINESS”

### *Ann marie Houghtailing Returns to Las Vegas*



The Pacific-West Fastener Association is pleased to bring back our favorite sales guru, Ann marie Houghtailing, to the National Industrial and Mill Supply Expo in Las Vegas this year.

In addition to a pre-show seminar on “How to Create a Sales Process for Your Fastener Business,” she also will be available for 30-minute consultations (by appointment) on the show floor. All Pac-West members are eligible for one free 30-minute consultation with Houghtailing each year.

Ann marie Houghtailing, principal of The Houghtailing Group, a boutique sales consulting and business development firm dedicated to empowering its clients to create opportunities and generate revenue in every economic climate.

In addition to live seminars, workshops and private consultations, Houghtailing also produces six sales e-newsletters and six webinars for Pac-West members each year.

### *Pac-West and NFDA to Hold Joint Conference in 2014*

Pac-West and the National Fastener Distributors Association will hold a joint conference February 12-15, 2014 at the Renaissance Esmeralda Resort in Indian Wells, California. This will be the first time the two associations have held an event together.



The task force that is planning the conference content promises

- Economic update from Dr. Esmael Adibi from the A. Gary Anderson Center for Economic Research at Chapman University

- “Manufacturers are from Mars, Distributors are from Venus, Part 2,” a debate between fastener manufacturers and distributors and follow-up to the panel discussion that took place at the NFDA 2013 Annual Meeting
- Ignite presentations
- Business Owners Forum and Business Executives Forum
- Fun and engaging social events, including golf

*More education programs are in development as of press time, so check the NFDA website for the latest details, [www.nfda-fastener.org](http://www.nfda-fastener.org)*

### *We're Going Back to Idaho*

Plan ahead and save the dates of August 6-9, 2014 for the Pac-West 2014 Fall Conference at the beautiful Coeur d'Alene Resort in Coeur d'Alene, Idaho. Ron and Heidi Stanley and Jennifer Harder of Empire Bolt & Screw (Spokane) already are working on conference details.



### *Bay Bridge Fastener Failures*

Join us on Tuesday, October 8 at the Holiday Inn Select in La Mirada, California, for a dinner meeting discussion on the Bay Bridge fastener failures and the problem of hydrogen embrittlement.

There are powerful lessons to be learned from the recent Bay Bridge hydrogen embrittlement problems. Not just engineering lessons, but things every fastener supplier should be aware of: things you can't afford not to know in order to protect your company.

This meeting is not about bolts, it's not about bridges, and it's not about hydrogen embrittlement. It's about what you need to know to protect your company from end users, contractors, suppliers, and even yourself, when the hydrogen hits the fan!

**For information about this and other Pac-West activities, visit [www.pac-west.org](http://www.pac-west.org) or call 714-484-4747. ☎**

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NEF's STRATEGIES CREDITED WITH BEATING THE SURVIVAL ODDS *continued from page 36*

The software is designed for "easy, one click access, allowing everyone from sales people, machine operators, quality control as well as the shipping department to get answers to questions from specifications and prints to specialized shipping instructions.

All appropriate employees can quickly track every job from the Employee Communication Center in the middle of the plant.

"Essentially the software allows a custom fit for every one of our 1,000 plus customers," Webster said.

He termed NEF's software as "our competitive edge."

In addition, The Employee Communication Center also displays monthly statistics in easy-to-read graphs allowing all employees to see how NEF is doing. This knowledge "binds the team together," Webster explained. "Everyone will know if the quote to order ratios are up or down as well as where the production efficiencies are at from the scrap to parts shipped out the door. On top of that they are alerted to any new issues, fastener technical news events, as well as what's on the events calendars."

Webster also credited selection of high quality raw materials and tooling for NEF's success. The company invests in the "best tooling and raw materials rather than lose production efficiencies with changeovers and scrap," he said. That leads to an "impressive record of holding tight tolerances; the current rejection rate which is now holding steady at 0.02%."

### ***Recession Survival***

NEF survived the recession which began in 2008 by

becoming even more "intensely focused," Webster told FIN. "We just got in a different mode. Every single thing we did mattered."

Quickly NEF developed a detailed recession game plan "and we followed it to the letter resulting in not one NEF employee was laid off," Webster said with pride.

The real beneficiary of NEF's recession plan was the customer, according to Webster.

"Because the ultimate goal is "never having to disappoint a customer. There is no secret to running a successful business, just follow the Golden Rule and be efficient at it."

NEF sells 95% of its fasteners through distributors and Webster aims to stick with its distribution strategy.

The third generation of the Webster family has joined

NEF. Jason Webster, the founder's grandson, is vice president of the business office.

### ***The Next 50 Years?***

NEF will soon add 6,000 sq. ft. to its plant. It is now producing 1.5 million parts per day, but with the additional space it will be expanding slotting, threading and heading capabilities as well as their size range.

"Things can change rapidly," Webster acknowledged. "We'll be ready. We always have been. It's been pretty challenging at times, but I think we've shown that we've got what it takes."

NEF is AS9100C certified with a 100% score and ISO 9001:2008 plus QSLM Levels 2/3 certified supplier serving the commercial, military, aerospace and automotive markets. 

***Story Courtesy of GlobalFastenerNews.com***





### **Sherex Fastening Solutions, LLC**

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## **SHEREX FASTENING SOLUTIONS, LLC LAUNCHES LARGE THREAD RIVET NUTS**

Sherex Fastening Solutions, the world leader in the manufacture and distribution of blind rivet nuts and specialty fasteners has launched something BIG, the first line of large thread Rivet Nuts from 1/2-13 to 3/4-10 (M12 to M20).

After three years of product development, the Sherex engineering & sales team was able to perfect the design and bring these specialized rivet nuts to market. They were developed for heavy duty applications in the Heavy Truck/Trailer Industry, Ag/Construction Industry, Rail Industry & Heavy Equipment Industry. "Large thread rivet nuts are the best fastening solution when it comes to attaching thin sheet materials," says Adam Pratt, President of Sherex Fastening Solutions.

Many companies currently use weld fasteners in these applications but with green initiatives and cost reduction requirements these companies would like to remove weld fasteners from their manufacturing process. Rivet nuts are superior to weld fasteners in that installing rivet nuts

requires much less energy and can streamline the manufacturing process (parts installed post paint, powder coat, or galvanizing) producing a much lower "total installed cost, with a better aesthetic value."

The full line of large thread Rivet Nuts will include sizes 1/2-13, 5/8-11, 3/4-10, M12, M16 & M20, and come in either a round body or a hex body for increased spin-out resistance. The line will be compatible with Grade 5 Class 8.8 bolts and platings will include a RoHS Compliant, Zinc Trivalent Clear plating and a Zinc Nickel, high corrosion resistance finish, available upon request.

All Sherex Large Thread Rivet Nuts are installed with the Sherex FLEX-18, one of the strongest tools on the market with 18,000 lbs. of pulling force & 15mm of available stroke.

All Sherex Large Thread Rivet Nuts are manufactured by our own TS16949 production facility and we provide unsurpassed customer service and support before and after the sale. 

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## DISTRIBUTOR NEWS

**The Gilchrist Foundation** has awarded two 2013 scholarships to Molly Brown, sponsored by Wurth Adams Nut & Bolt, Maple Grove, MN and Matthew Mullane sponsored by Mullane Sales, Mount Dora, FL. We wish them well and are pleased to assist them with their education.

Robbie and Gina Gilchrist established the Gilchrist Foundation Fastener Scholarship in 2000. Their goal was to return something to an industry that was very good and supportive to them. The criteria for applying are that upon completion of their schooling the applicant must make an effort to work in the Fastener Industry or be a current employee from an NFDA or SEFA member company. Unlike other scholarships, the Gilchrist Foundation Scholarship may be applied for during any year of a persons schooling. Also, an applicant may be a part time student currently working in the fastener industry.

Starting in 2014 The Gilchrist Foundation Scholarships will be awarded via additional Regional Associations.

For additional information contact Robbie Gilchrist at 336-884-1704 or email to: [rgilchr485@aol.com](mailto:rgilchr485@aol.com).

## DISTRIBUTOR NEWS

**Sherex Fastening Solutions**, the world leader in the manufacture and distribution of blind rivet nuts and specialty fasteners has launched a new product line within its Large Thread Rivet Nut family called STEP-NUT™, the first line of Large Thread Rivet Nuts for the utility pole industry.



STEP-NUT™ was engineered & developed to attach step bolts to utility poles allowing utility workers to climb the poles to perform maintenance & repairs. Previously manufacturers were welding clips onto the poles which became time consuming & expensive. STEP-NUT™ is superior to weld fasteners in that installing rivet nuts requires much less energy and can streamline the manufacturing process (parts installed post paint, powder coat, or galvanizing) producing a much lower "total installed cost." Rivet nuts also have a better aesthetic value when compared to weld fasteners.

Originally developed for step bolts Sherex has found many other applications in the utility pole/electrical industry where STEP-NUT™ provides value including attaching components to brackets, control boxes, transformers, telecommunication equipment, lighting equipment & more.

STEP-NUT™ is unique in that all rivet nuts within the product line were designed with oversized threads to accommodate for the hot dip galvanized coating on the step bolts. STEP-NUT™ is available in a round body or a hex body for increased spin-out resistance. All STEP-NUT™ rivet nuts are plated in a, RoHS compliant high ductility Zinc Nickel plating that exceeded our expectations. The plating achieved over 3,000 hours of no visible white rust.

All STEP-NUT™ rivet nuts All Sherex Large Thread Rivet Nuts are installed with the Sherex FLEX-18, one of the strongest tools on the market with 18,000 lbs. of pulling force & 15mm of available stroke.

For additional information on the Sherex. STEP-NUT™ & the FLEX-18 Tool please visit [www.sherex.com](http://www.sherex.com) or contact Sherex at 1-866-474-3739.

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**SECURITY CONSIDERATIONS - PART 2** *continued from page 10*

Under no circumstances should lunch boxes, shopping bags, gym bags, purses or personal items be allowed anywhere near your warehouse. Provide lockers, coat rooms or other secure areas where these can be left well away from anything that might be stolen. This is to protect the individual as well as the company. Gun safes or gun lockers are also a good way to handle concealed carry issues.

Employees who frequent flea markets or sell on the Internet might be getting their inventory from your warehouse. Go to Craig's list or EBay and search on what is missing from your inventory. The "hits" might be surprising. Visiting local swap meets and markets can be similarly enlightening or shocking.

Collusion with competitors is also not impossible. What better place to "fence" your fasteners than through someone in the same business. One operation discovered a plan to drug the night supervisor's coffee, clean out the warehouse and load the products into a competitor's truck only when a participant had "cold feet." He was the only one in the warehouse who wasn't fired.

### **Watching The Customers**

Sometimes your best security assistant is your customer. A food purveyor found this out when three of his customers called to tell him that his driver offered them discount merchandise under the table. Another distributor received customer complaints about his drug sealing truck driver...and a subsequent visit from the local police and DEA. These are obvious clues, but there are many other indications for internal and external theft.

Tracking customer complaints, shortages and substitutions is a vital component of doing business. Using this data to trigger management attention to unusual conditions can reduce the severity of a loss by eliminating the source quickly. Large or frequent credits usually point to collusion or a "ghost inventory" scheme. Frequent visits by repair personnel, security system techs and others are also a source of concern both for the equipment being maintained and the possibilities of collusion. Tracking repairs just like returns using the same programs and systems costs little but can save a lot.

Customers who deal with only one employee and refuse to buy from anyone else may just like that sales person or perhaps they have a "five finger discount." Establishing "sales teams" is one way to reduce this risk. Policies against employees receiving gifts or favors from suppliers,

customers and reps should be in place. If gifts or premiums are provided use a periodic lottery to distribute these with everyone having an equal chance of winning something.

Watch for reduced purchases by customers. This provides an early indication of a marketing problem, product change or the same amount of inventory going out without being billed. Sales data is not just for the sales staff.

In one warehouse that we visited the boss mentioned that two of his customers continually shoplifted from the counter stock. His solution was to automatically charge an extra \$25.00 on every invoice to cover the loss. It had been going on for years and the customers never complained.

This is a sad commentary on the relationship between the customer and the distributor, but it is far more worrisome that other customers may have noticed this shop lifting and done their own theft undetected. Installation of a security camera system clearly showed that this was indeed going on.

One could go on and on covering what to watch for in any operation. Developing your own intuition and observational skills is not going to just

happen spontaneously. Seeking outside help from security consultants, installing cameras and establishing policies/programs to meet your context will definitely help keep honest people honest 100% of the time. But this is not enough. Deciding upfront what to do when you detect a problem is even more important.

### **What To Do When You Hook A Big Fish**

Before chartering a boat to go deep sea fishing one should decide what to do if you actually hook a big fish. Will you fight it to the end, bring it in the boat or cut the line. Every decision after this is dictated by the initial premise. Finding an internal or external security problem is no different.

If prosecution to the fullest extent of the law is contemplated the "Rules of Evidence" and chain of circumstances must observe all the subtleties and nuances involved in making an arrest into a conviction.

Even for trained and experienced law officers this is difficult at best and likely to be overturned in court if any element is omitted. For example, one distributor looked out his window and watched a warehouse worker loading merchandise into the trunk of his car. He checked with the warehouse manager and determined that the materials were not an order, then called the Police. The officers had the individual open the car, documented that the goods should not be there and arrested the employee.

**Unless you  
have a very unusual  
customer base there is no  
reason why your employees  
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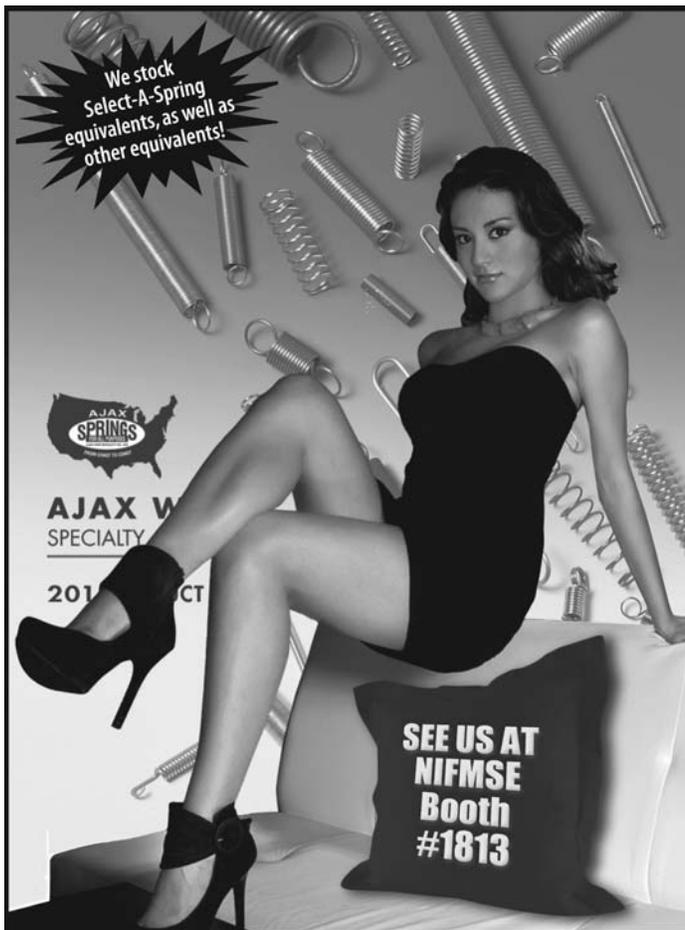
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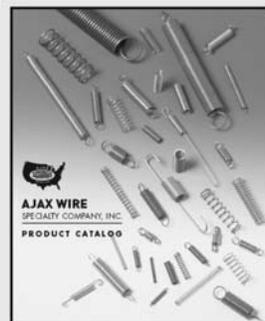


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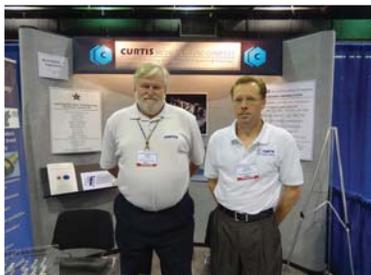
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**CELEBRATING 50 YEARS OF EXCELLENCE!** *continued from page 12*

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Rosemary Hacaj (left) and Ivo Peske (right)*

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## FASTENER WORDSEARCH

*Can you find and circle in the grid above, the terms listed below?*

- Askew bolt
- Ball head
- Blank
- Burnishing
- Burr
- Cap screw
- Collar
- Copper alloy
- Cotter pin
- Countersunk bolt
- Dent
- Die fin
- Embossing
- Fillet
- Gimlet point
- Grip
- Machine screw
- Oval head
- Pan head
- Pinch point
- Pan
- Seam
- Shank
- Slot depth
- Spring pin
- Tubular rivet
- U-bolt

*Solution on Page 252*



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**SECURITY CONSIDERATIONS - PART 2** *continued from page 156*

This was dismissed in court because the car was still on company property and therefore the goods were not stolen. With a defense based on "I just wanted to see what would fit in case I ever had to make a delivery," the worker was reinstated with back pay and he then sued the company for "false arrest."

From your perspective, if prosecution is a likely scenario then bring in professionals who know how to make it stick. There are many private detectives and security services that can work undercover if necessary, interpret videos and help you create documentation that will stand up in court. Use outsiders, even if your own background includes criminal law. The cost is relatively low in comparison to having an arrest go sour. Even better, if the agency finds nothing and reports this to you privately morale and trust will not be breached.

If there is genuine criminal activity that affects the public, your customers or your community then there is no question about bringing your suspicions and observations to the local Police, FBI or Homeland Security. Sitting on the evidence makes you an accessory and it is ethically and morally wrong. Your observations and intuition can prevent a tragedy. It is just as likely that you will be visited by a law enforcement agency that has the individual under surveillance and any evidence you can provide will help determine how they move forward. Their input can also facilitate your actions to discipline or terminate the individual.

Similarly external theft or vandalism must be reported and promptly dealt with. Washing off or painting over graffiti immediately sends a message that your company takes this seriously. Increased police patrolling, installation of cameras/lighting or the addition of security guards will scare away repeat offenders. Adding "No Trespassing" signs and signing complaints against even juvenile perpetrators empowers the law enforcement officers to come on premises and guarantees that their risk and efforts will not be in vain.

One excellent habit to cultivate is to drive past your building at any hour of the day or night, especially weekends. If you see something going on call the Police immediately and let them handle the situation. **NEVER CONFRONT ANYONE, EVEN IF YOU ARE ARMED AND KNOW HOW TO PROTECT YOURSELF.** If anything happens let the professionals take care of it. Photograph the situation, write down license numbers and observe from a safe distance as unobtrusively as possible but stay out of

harms way at all times. High speed chases and gun battles are for Hollywood and are likely to turn out badly for you, especially if you are mistaken for a bad guy.

At the opposite end the spectrum is getting the bad apples out of your operation with a minimum of repercussions. In the previous article it was mentioned that one supervisor did this by leaving a note in place of the stolen goods that "We know who you are and what you are doing, don't come back." This is the essence of achieving the desired results through voluntary conviction and termination. There are usually many methods of doing this if you are creative and stop to think things through.

In today's litigation oriented society the first step is to document the behavior or event.

Maintaining comprehensive, unbiased and fair files on every employee is the only way to establish credibility. Include meritorious and praise worthy events as well as breaches of company rules and conduct. If the problem is theft document, document and document some more. Be sure to include the who, what, when and how

along with photos, copies of paperwork and statements of witnesses. All this can and may be used in court. When enough evidence accumulates or the individual steps way out of line then you can move ahead confidently.

**NEVER FIRE SOMEONE IN THE HEAT OF THE MOMENT.** Suspend them and get them out of the building. In the case of workplace violence call the Police, get out of the way and let them remove the problem as you inform the individual that they are not welcome until invited to return. This holds true for most situations, including arrest for a non-work related situation.

At some point when everything has calmed down ask the individual to come in by appointment. In the presence of reliable witnesses (bodyguards optional) give them the termination notice and a factual, provable reason why they are being fired. Any criminal conviction is usually grounds for letting the now former employee go. Try to do this without embarrassment if possible and remember to document every step of the way.

### One Last Point

Theft is big business causing billions of dollars in losses every year. Today it funds everything from narcotics abuse to international terrorism. Putting anti-theft policies and programs in place is no guarantee that you won't be targeted, but it does help to minimize losses and keep the good people safer. 

**Employees who frequent flea markets or sell on the Internet might be getting their inventory from your warehouse. Go to Craig's list or EBay and search on what is missing.**



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## THE IMPORTANCE OF PROPER HEAT TREATING *continued from page 14*

### Controlled Quenching

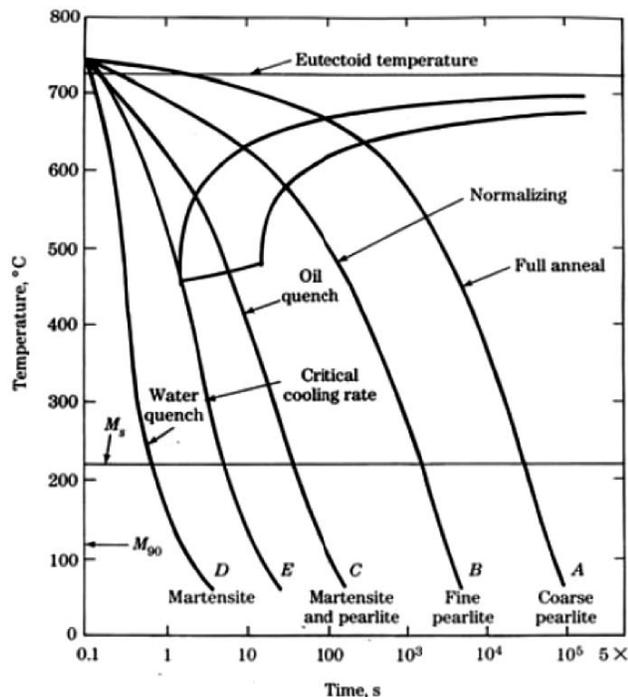
The goal of hardening the steel is to produce a fine grain, fully martensitic microstructure, as it is much harder than austenite. Martensite is formed upon cooling. The minimum cooling rate ( $^{\circ}\text{F}$  or  $^{\circ}\text{C}$  per second) that will avoid the formation of any softer products of transformation is known as the critical cooling rate.

Before heating and quenching any steel, a test must be performed to determine its hardenability. This is called the end-quench hardenability test, or the Jominy test. After heat treating and quenching per standard methods, hardness readings are taken at 1/16" intervals from the quenched end at a depth of 0.015". Each location on the test piece represents a certain cooling rate.

The combination of heat treating and quenching refines the structure of the steel to enhance its physical characteristics. During the quench, the cap screw's temperature may be brought from above the upper transformation temperature to 600 $^{\circ}\text{F}$  (316 $^{\circ}\text{C}$ ) in 2 seconds.

The critical cooling rate is determined by the chemical composition of the steel, the Jominy test and the austenitic grain size. These factors influence how fast steel must be cooled in order to form only martensite. How the steel cools will determine its properties.

For each steel and alloy, there is a cooling guide called a 'Time-Temperature-Transformation' graph, or TTT for short. It is also known as an Isothermal Transformation Diagram. This is illustrated below.



The bottom axis of the graph is the logarithmic time in seconds. It becomes apparent that the cooling rate must

be very fast once the steel cools to 1333 $^{\circ}\text{F}$  (723 $^{\circ}\text{C}$ ) to go from austenite to martensite. The cooling path chosen determines the structure and properties of the steel.

The SAE J429 and certain ASTM product standards specify oil quenching on special alloys, such as; A354 BD and SAE Grade 8 cap screws, as well as 1/4" through 3/4" diameter A449 cap screws. The SAE J429 permits water quench on grades 5 and 5.2. Larger diameter A449 fasteners may be quenched in water. The choice of the quenching liquid is determined by the amount of heat which must be dissipated, a function of the cap screw's cross-sectional area of diameter, and the steel to be quenched. Oil quenchants have been the preferred medium for controlled and rapid cooling rates.

After quenching, the tensile strength and hardness of the cap screw exceed optimum levels. The SAE J429 specifies a microstructure of approximately 90% martensite prior to tempering. The 'as quenched' hardnesses are also taken to confirm core hardness. Since the hardnesses are high enough to produce a brittle material, the cap screws must be 'softened' from another heat treating process. This second heat treat is called tempering.

### Tempering

Tempering is required to relieve the internal stresses that are built up during the initial heat treat hardening process. Tempering is similar to the annealing process carried out on the raw steel wire prior to bolt-making procedures. Tempering takes the super hardened martensitic structure and makes the cap screw less brittle and more ductile by relieving the internal residual stresses and improving its toughness. This treatment also increases the steel's shock resistance, and lowers the tensile strength to desirable levels.

It is this combination of heat treating, quenching and tempering that imparts a cap screw with its final physical specifications of hardness, proof load, yield strength and tensile strength. Steel that has a fully martensitic structure before tempering will produce the highest yield strength, the highest ductility, the highest fatigue strength and the greatest toughness.

Some high strength specialty bolts begin life with a steel differing in composition from standard ASTM or SAE recommended chemical compositions. The basic difference is during the tempering process. Unless enhanced alloys are used and special care is taken with the heat treating process, cap screws with higher than standard specification tensile strength and hardness are also more brittle. Regardless of the steel choice, it is the heat treatment that determines the fastener's final characteristics. 

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# FASTENER TECH™ '13

## ROSEMONT, IL - JUNE 10-12, 2013





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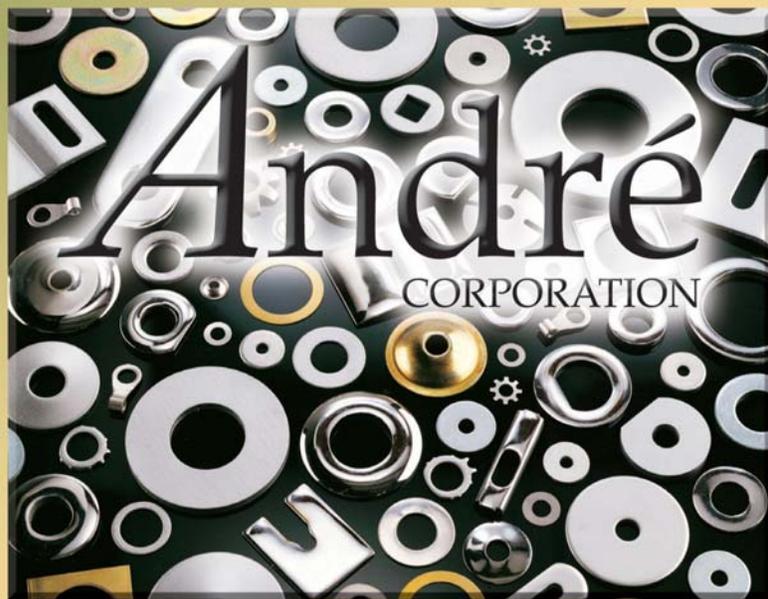
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AN INTERVIEW WITH RICHARD HAGAN, THE PRESIDENT OF PINNACLE CAPITAL CORPORATION *continued from page 24*

By 1992, the cross-border M&A business of IPS had declined dramatically and the decision was made to close the New York and London offices. I very much enjoyed the M&A business and I wanted to find a specialty or niche so I could develop an ongoing M&A business practice. I had recently sold a fastener company (Lamson & Sessions GmbH) and I felt the highly-fragmented fastener industry might be the ideal industry for a "one-man M&A shop" to be successful. So, I decided to form Pinnacle and shortly thereafter I was hired by Lamson & Sessions to sell their last remaining fastener business, Valley-Todeco Inc. in Sylmar, California.

**LINK** *So what is the environment like for fastener deals at this time?*

**HAGAN** We keep track of every fastener deal that happens worldwide and we've been doing this for more than ten years. Through the end of July, there were a total of 17 fastener deals completed this year, so we expect the number of deals completed during 2013 will be comparable to the average of 30 over the last three years. There were 31 fastener deals completed in 2012, 29 fastener deals were completed in 2011 and 30 fastener deals closed in 2010.

**LINK** *What are the primary factors that drive deal activity in the fastener industry?*

**HAGAN** In my opinion, it's the state of the global economy. Deal activity increases when the global economy is strong and deal activity slows when the global economy is depressed. That said, the fastener industry is highly-fragmented, so there will always be mergers & acquisitions in the industry simply because of the sheer number of companies in existence.

Private equity firms have been major players in the fastener industry since I formed Pinnacle and they certainly drive deal activity ..... because the typical objective of a PE firm is to make a platform investment and then grow that platform via bolt-on acquisitions. Private equity firms or fastener companies owned by a private equity firm are typically highly-motivated to make deals, so they are the type of buyer I like to do business with. In fact, we closely monitor the fastener company holdings of PE firms and seek to work with those companies on the buy-side and the sell-side.

**LINK** *So the more private equity firms invest in the fastener industry, the better it is for deal activity and the better it is for your firm?*

**HAGAN** I don't believe there's any doubt that's true. For example, look at what Elgin Fastener Group LLC (EFG) has done since it was acquired by Audax Group in August 2011. EFG was a platform investment for Audax, a Boston-based private equity firm, and their stated objective is to aggressively grow EFG via bolt-on acquisitions. EFG has completed six bolt-on fastener company acquisitions during the two years it's been owned by Audax, including two acquisitions this year.

Pinnacle was the financial advisor to the shareholders of Vegas Fastener Manufacturing when it was sold to EFG on April 1st of this year, so I have worked with the guys at EFG / Audax and they are a very nice group to work with. Of course, not all private equity investors are as aggressive as Audax. We are aware of twenty-eight PE firms which own a fastener company at this time.

**LINK** *Are you including non-US private equity firms in that total?*

**HAGAN** Yes. In fact there are significant fastener industry investments (holdings) in the United States by non-US private equity firms and vice versa.

**LINK** *So how is business for Pinnacle at the moment?*

**HAGAN** We are quite busy right now and I anticipate that 2013 will be one of the best years ever for Pinnacle. We closed on the sale of Vegas Fastener Manufacturing earlier this year and we have another transaction scheduled to close in about a month. We also have a sale assignment underway that may close before year-end and we are assisting a client with an acquisition which should close before year-end.

**LINK** *In closing, what would you say is the advantage to hiring Pinnacle to sell a fastener business versus some other advisory firm?*

**HAGAN** I believe I'm the only M&A specialist in North America that focuses exclusively on the global fastener industry. I also believe there is no other investment banker that understands the fastener business like I do AND has the deal experience that I have. I have sold a total of twenty-one fastener companies in my career, so I have accumulated a great deal of industry-specific knowledge. This accumulated knowledge and deal experience enables Pinnacle to expertly and efficiently assist our fastener company clients in successfully achieving their strategic objectives, whatever those objectives might be. 

# What do you need?

## Sex Bolts



Including the MALE SCREW and FEMALE SCREWS.  
Various heads. Thread #10-24.  
Length 1/2" - 4". Other sizes available.  
Materials: Steel, Zinc Plated, Stainless Steel.

## Binding Posts & Screws



Including the MALE SCREWS and FEMALE SCREW.  
Thread #8-32. Length 1/8" - 6".  
Other sizes available.  
Material: Aluminum, Brass.

## Blind Rivet Nuts, Blind Jack Nuts & T-Nuts



Round and Hexagon heads. Big and small flanges.  
Open and closed ends. Knurled ones are also available.  
Materials: Aluminum, Brass, Stainless Steel and Steel.

## Clinching Parts (Nuts & Screws)



Bushes, Clinching Nuts, Stand offs, Studs and Spacers. Information on sizes and materials available upon request.

## Self-Tapping Threaded Inserts



Internal thread #2 - 7/8". External thread M4.5 - M36. Provides stronger and more durable permanent threads in plastic.  
Materials: Steel, Brass & Stainless Steel.

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**1:00 PM – 2:00 PM** – “Know Today How Your Fasteners will Perform Tomorrow” – Presented by Expo Management. Dr. Louis Raymond, FASTM, FIAE, worked for R & D Laboratories of the Aerospace Corporation and served as Chairman of ASTM Committee F07 on Aerospace and Aircraft Subcommittee F07.04 on Hydrogen Embrittlement. His company, LRA Engineering and R & D Labs, specializes in fastener material selection, design and analysis. In 2006, Dr. Raymond received the Industrial Fasteners Institute (IFI) Roy B. Trowbridge Technology Award in recognition of significant contributions toward the understanding of hydrogen embrittlement through years of research into accelerated methods for measuring threshold stress and development of the incremental step load technique as a practical means for quantifying and controlling hydrogen embrittlement in fasteners.

**FREE for all 2013 Expo registrants wearing their badge. Nearly 70 persons have already registered for this important presentation.**

**2:00 PM – 4:00 PM** – “How to Create a Sales Process for Your Fastener Business” – Presented by the Pacific-West Fastener Association. Speaker: Ann marie Houghtailing, principal of the Houghtailing Group, a boutique sales consulting and business development firm dedicated to empowering its clients to create opportunities and generate revenue in every economic climate.

**Registration Fee:**

**Fastener Association Members \$100 before September 1st; \$150 after September 1st.**

**Non-Members \$150 before September 1st; \$200 after September 1st.**

**2:00 PM – 4:00 PM** – Women in the Fastener Industry (WIFI) Meeting (Men welcome, too!)

Moderator: Mary Lou Aderman of the Aderman Company, Inc. Participate in this lively panel discussion concerning the status of the fastener industry. A panel of women will share their perspectives and solutions along with answering questions from the audience. There will be an opportunity to network at the meeting as well. Everyone (men and women) are welcome and encouraged to participate For more information contact

Mary Lou Aderman at [AdermanCo@aol.com](mailto:AdermanCo@aol.com).

**Registration Fee: WIFI Members \$15, Non-Members \$25**

**Wednesday, October 23 – Welcome Reception**

**6:00 PM – 7:00 PM – Harrah's Las Vegas Hotel – Nevada Ballroom**

Join us as the National Industrial Fastener & Mill Supply Expo throws the biggest and best party of the year to celebrate its 33rd anniversary and thank the many exhibiting companies and show visitors who have helped make this “North America’s Largest” industry event. Feast on a plentiful and tasty array of delicious appetizers, enjoy your favorite drink and have a fun time networking with old friends and forming new relationships. FREE to all 2013 exhibitors and attendees wearing their badge.

**Thursday, October 24 – Expo**

**7:30 AM – 4:00 PM** - Registration Open - Hall A Foyer - Sands Expo & Convention Center

**9:00 AM – 4:00 PM** - Expo Open – Hall A - Sands Expo & Convention Center

**Thursday, October 24 – Education and Meetings**

**1:00 PM – 2:00 PM** - Seminar for Manufacturers’ Reps – Presented by Manufacturers’ Agents National Association (MANA) - Rep Firm Succession Planning and Valuing/Buying/Selling/Merging Rep Firms; Attracting and Retaining New Salespeople

If you don’t have a plan to sell your rep company someday, you are missing out on capturing the value you created as you grew your firm. Get the information you need to help you plan to sell your company from MANA CEO and President, Charles Cohon. One of the best ways to sell your company is to sell to your employees, so Cohon will also cover key points on recruiting new salespeople who could eventually become prospective buyers for your rep company.

**FREE to MANA members. For more information, contact [www.MANAonline.org](http://www.MANAonline.org).**

**Over 60 persons have already registered for this valuable presentation.**

*Continued on page 174*

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**2:15 PM – 3:15 PM** – Seminar for Manufacturers – Presented by Manufacturers' Agents National Association (MANA) – "Working with Manufacturers' Reps: It's Not Just Business, It's Personal" - Commissions you pay represent 10% of one of your rep's income. Does that rep spend 10% of his time on your line? Maybe, but the answer could also be 15% of his time, or 20% of his time, or 5% of his time. And it all depends on you. In this session, Manufacturers' Agents National Association CEO and President, Charles Cohon reveals the best ways to earn more of your reps' time than the commission income your company generates strictly justifies, and warns you of the pitfalls that might trigger a rep to spend as little time on your line as possible. This session will give you the tools you need to thrive with reps.

**FREE to MANA members.** For more information, contact [www.MANAonline.org](http://www.MANAonline.org).

Nearly 70 persons have already registered for this valuable presentation.

**4:30 PM – 6:30 PM** International Fastener Machinery and Suppliers Association (IFMSA) Meeting (by invitation only). The IFMSA will hold its annual general meeting followed by a reception.

**FREE for all IFMSA members and invited guests only.**

**Friday, October 25 – Expo**

**7:30 AM – 1:00 PM** Registration open in Hall A Foyer - Sands Expo & Convention Center

**9:00 AM – 1:00 PM** Expo Open in Hall A – Sands Expo & Convention Center

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**Additional Partner Hotels -****Treasure Island**

\$99 - \$149 Rates good for nights of 10/21/2013 – 10/26/2013 based on availability and/or until September 21, 2013.

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**Harrah's Las Vegas**

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Reserve rooms online at [www.fastenershows.com/hotels/](http://www.fastenershows.com/hotels/)

**Flamingo**

Rates guaranteed to be 10% lower than Flamingo's online rates for 10/21/2013 – 10/25/2013 based on availability and/or September 23, 2013.

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Reserve rooms online at [www.fastenershows.com/hotels/](http://www.fastenershows.com/hotels/)

For additional information contact Susan Hurley, General Manager, National Industrial Fastener & Mill Supply Expo, (614) 895-1279, [info@fastenershows.com](mailto:info@fastenershows.com) or visit the Expo website at [www.fastenershows.com](http://www.fastenershows.com). 

*Exhibitor list on page 204*



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## DISTRIBUTOR NEWS

**Intercorp.**, an importer of high quality construction fasteners under the Strong-Point brand, Intercorp announces the addition of four new employees to their growing team. Michele Warner, Account Manager to the Dallas office, Alex Smith, Account Manager to the Atlanta office, Jorge Argueta, Account Manager in the Los Angeles Office and Paul Randall Smith, Director of Marketing.

Warner joins the team as an experienced sale executive, working in the fastener industry since 2000. She brings her well rounded background in purchasing and account management to the growing Dallas office. Warner's previous experience in the distribution channel will bring added value to the already knowledgeable staff.



Alex Smith moves to the sales department from the warehouse where he gained in depth knowledge of Intercorp's products. His strength in providing customer service at the shipping level will now be utilized at the sales level. Smith's hands on experience will be a valuable resource for the Atlanta office.



Argueta looks to bring his past success in sales and customer service to the headquarters in Los Angeles. Argueta's experience in internal and external sales in both domestic and international markets will be an integral asset to the Intercorp sales team.



Paul Randall Smith brings a new dynamic to the marketing department with experience in hospitality, retail and finance. Smith holds an MBA in International Business from George Fox University and a Bachelor of Arts from the University of Oregon. Smith has worked most recently as a management consultant in Southern California and has previously held the Director of Marketing position at multiple firms in Portland, OR.

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](http://www.strong-point.net).



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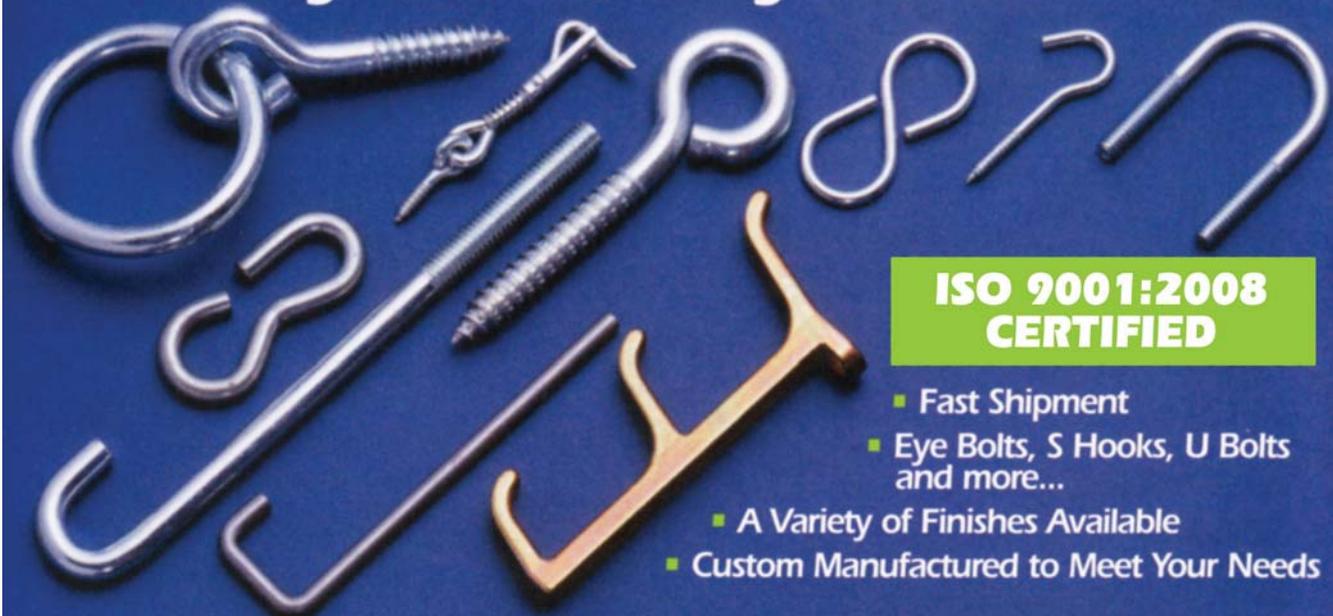
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### Final Link in Supply Chain to be Released at NIFMSE in Las Vegas

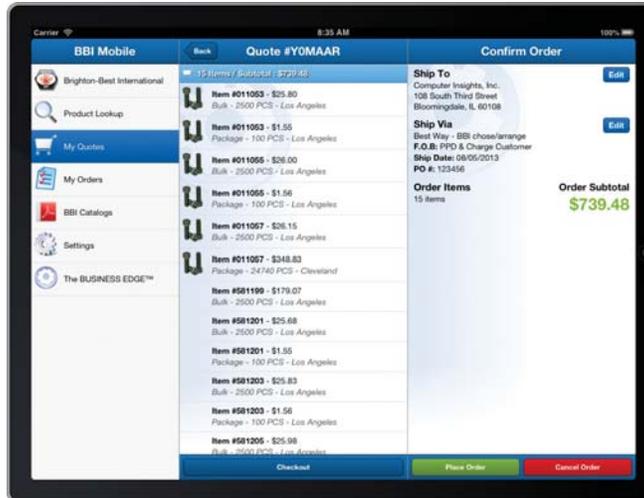
Brighton-Best, International (BBI) officially announced the release of their new Mobile site. This new Mobile site will run on iPhones, iPads, Android Phones and Android based Tablets.

### Technology Leader

As a technology leader in the Fastener Industry, BBI has continuously pushed the envelope of innovation. The most striking example of this is their hugely successful website found at [www.brightonbest.com](http://www.brightonbest.com), where their customers can check stock and prices, enter and edit quotes and orders, verify the status of their open quotes and orders, obtain MTR's and many other things from the customers' PC's.

### BBI MOBILE®

Now, using the new BBI MOBILE® site, BBI customers can do many of the same things from their mobile device. This will enable BBI's customers to have valuable information right at their fingertips while they are in the field visiting their customers. More than that, they will be able to take immediate action.



The new site includes:

### [1] Full Category Product Lookup of all BBI Products includes:

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- Customer Part Number Search
- Detailed Description
- Package Quantity
- Real Time Price and Availability of Package Quantity by Branch
- Bulk Quantity
- Real Time Price and

Availability of Bulk Quantity by Branch

- Weight
- Picture of Product

### [2] Enter & Review Quotes

- Enter Quotes
- View Quotes
- Edit Quotes
- Convert Quotes to PO's
- Review Orders

### [3] Edit & Confirm Cart

- Change Quantities & Warehouses
- Remove Items
- Order Confirmation Screen
- Checkout
- Orders Placed on BBI MOBILE® can be viewed on the BBI Website

### [4] View BBI Catalogs

please turn to page 180

Test drive the new mobile site at  
[www.brightonbestmobile.com](http://www.brightonbestmobile.com)





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**BBI GOES MOBILE** *continued from page 178*

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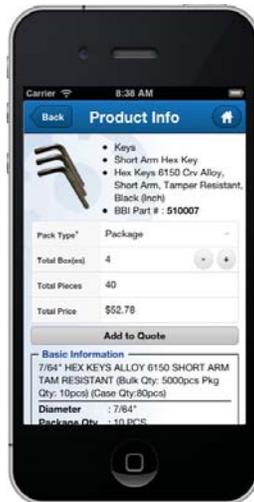
This new system has been co-developed by BBI and Computer Insights, Inc., makers of the popular Brighton-Best Connection®. Using The BUSINESS EDGE 2.0® and the Brighton-Best Connection®, users have all the same functionality and more from within their internal company ERP system.

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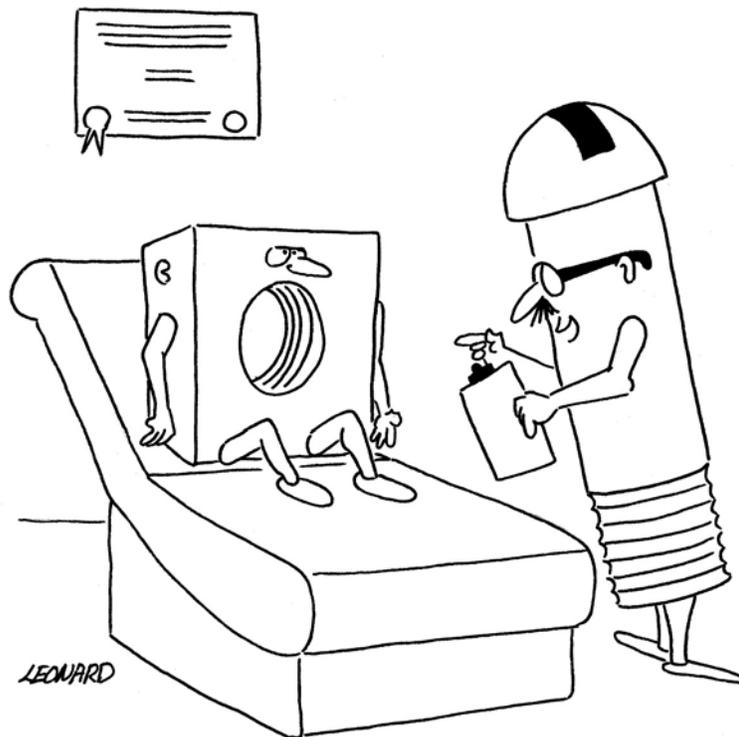
www.brightonbestmobile.com. There is nothing to purchase, but you must be a BBI customer with a valid login and password. The same password that you use on the BBI website will work on the BBI MOBILE® site. You can use the QR Barcode in this article to go directly to the download site.

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## DISTRIBUTOR NEWS

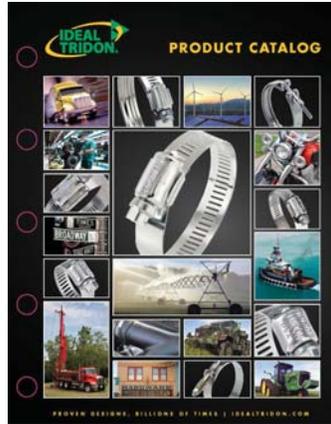
**Ideal Clamp Products, Inc.**, leading designer and manufacturer of worm gear, hose and specialty clamps, announced the publication of its new 40-page, comprehensive IDEAL-TRIDON brand catalog. The full-color, glossy catalog features a bold new look for the company and signifies the official launch of the IDEAL-TRIDON brand.

It's a complete resource guide for joint sealing products used by customers in wide array of markets, including industrial, marine, automotive, hardware and plumbing.

"The new IDEAL-TRIDON catalog was designed with our customers in mind," said Mark Cramer, Global Director of Sales & Marketing—Aftermarket. "Our marketing team worked hard on developing an intuitive approach to how information is presented. The result is a comprehensive document that communicates the features, benefits, applications and material choices for each product line while providing individual part numbers for the end user. This should make it much easier for our customers to find what they're looking for while informing them about our other products."

The catalog features the company's new SmartSeal product line and an expanded section on merchandisers and packaging that highlights updated sub pack boxes, IDEAL-TRIDON exclusive new merchandiser displays and a retail profit center kit. It also includes handy cross references based on hose ID and competitive products.

For more information, or to receive your copy of the new catalog, contact Ideal Clamp at 8100 Tridon Drive, Smyrna, TN 37167. Tel: 615-459-5800, Fax: 615-459-5800 or visit their website at [www.idealtridon.com](http://www.idealtridon.com).



## DISTRIBUTOR NEWS

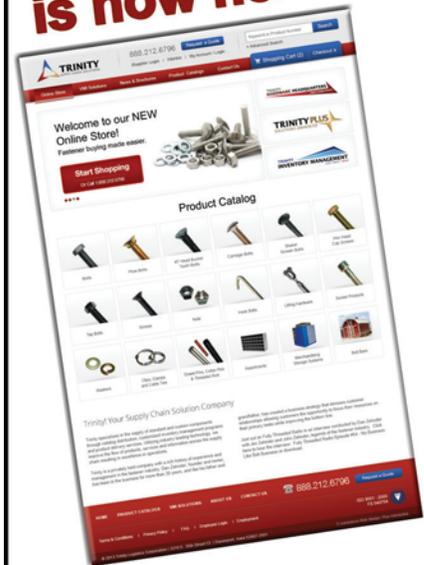
Douglas Adams has announced the appointment of Matthew Dudenhoeffer as President of **EFC International**. With over 20 years' experience with EFC and in the industry, Matthew is positioned well to drive the company's ambitious growth initiatives.

Matthew joined EFC International in 1993 as a Sales Engineer. He held the position of Strategic Business Units Manager and in this capacity was instrumental in EFC's improvement in innovation, service and success. In 2012, Matthew was promoted to the position of Vice President and has played an integral role in executing strategy and driving the overall success of EFC. He holds a BSIE and MPA from the University of Missouri.

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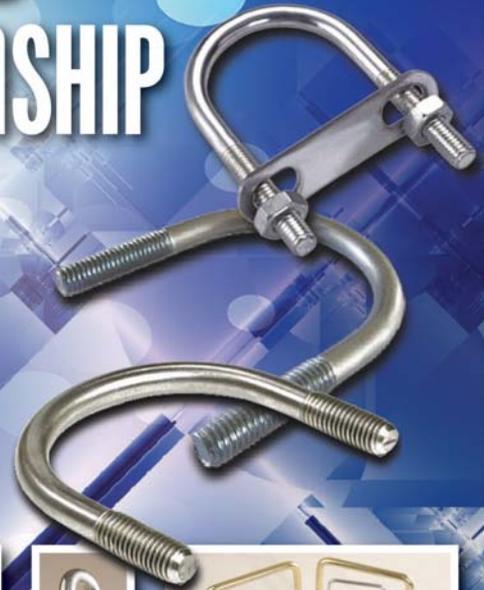
**LNA Solutions, Inc.**

announces that its BoxBolt® is the first blind fastener to receive an International Code Council (ICC) Evaluation Service Report for use as ICC-ES ESR-3217. ICC is an accrediting association dedicated to developing model codes and standards used in the design, build and compliance process to construct safe, sustainable, affordable and resilient structures.

BoxBolt provides a safe, secure means of connecting rectangular, circular, or square hollow tube steel for cladding, curtain walls, blast walls, cell tower, reinforcement, and in other applications where access to the tube is limited to the opposite side of the connection, according to LNA Solutions. No on-site drilling or welding is required, and installation is fast and easy using basic hand tools. BoxBolt connections offer a guaranteed safe load and provide aesthetic detail plus a corrosion-resistant finish. It is available in diameters of 1/2-inch, 5/8-inch, and 3/4-inch, each with three different lengths.

The method of using "blind-bolt type" fasteners has been recognized since 1996 in the AISC Steel Construction Manual (Section 7-13) as an alternative to welding; however, it was not a certified solution by an accrediting agency.

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"Our customers have been asking for us to acquire such approval, with the need to have an ICC Evaluation Report being the most common request," according to Mike Mumau, president of LNA Solutions.

"Since no other blind fastener had ever undergone the evaluation process, ICC required that we develop an Acceptance Criteria (AC) for BoxBolt," Mumau said. "We then began working with Ronald Hamburger,

Senior Principal at Simpson, Gumpertz & Heger to develop what is now known as AC437. This was approved by ICC-ES for testing."

BoxBolt is the only blind fastener that has an ESR from the ICC-ES.

For more information, contact LNA Solutions, Inc. at 3924A Varsity Drive, Ann Arbor, MI 48108. Toll-free: 1-888-724-2323, Fax: 734-677-2339 or Email: info@lnasolutions.com. You can also visit their website at www.LNASolutions.com.

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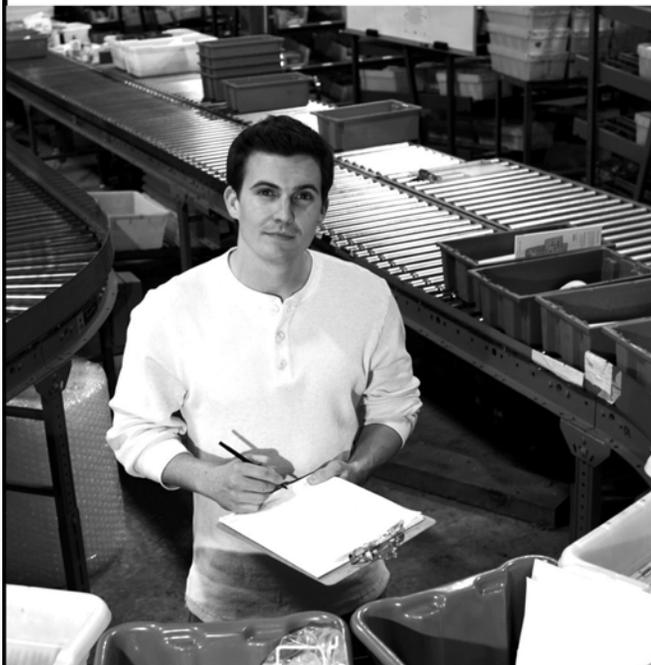
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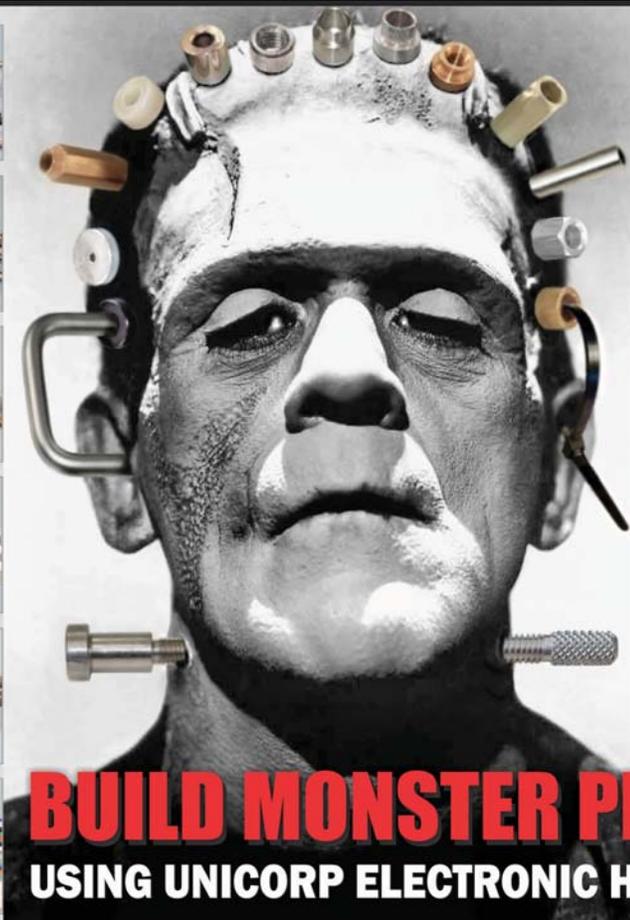


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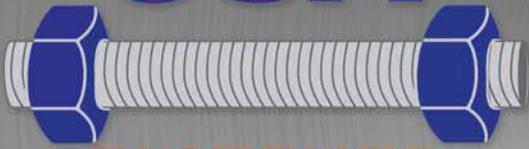
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# WORK WITH INTENTION: THE 3 COMPONENTS OF PERFORMANCE TIME

Everything you want to accomplish in life requires an investment of your time, so when you want to improve your results, you must consider the fact that your supply of time is limited.

Even in this era of innovation and technological advancement, time, more than any other resource, is the limiting factor. Let's face it, everything requires time. It is the one truly universal condition. Even more vexing is the fact that the supply of time is completely inelastic. No matter the magnitude of demand, the supply is fixed. Moreover, it's perishable. And yet, time is perhaps the most squandered of all personal resources.

To become great, you must choose to allocate your time to your greatest opportunities. You will have to choose to spend time on the difficult things that create your biggest payoffs. To be great you will need to live with intention. This will require you to be clear on what matters most, and then to have the courage to say no to things that distract you. You will need to guard your time intensely, delegating or eliminating everything possible that is not one of your strengths or does not help you advance your goals.

To be your best, you must intentionally align your time and activities with your strengths and your unique capabilities. When you do, you will also experience a new and ever-increasing level of performance and satisfaction. To achieve this level of performance will

require that you carve out time for the strategic—those actions that are important, but not necessarily urgent. Strategic activities don't typically have an immediate payback, yet they create substantial returns in the future. To stay focused on your strengths, you will need to manage your interruptions and keep the low-payoff activities to a minimum.

In spite of the priceless value of time, many people engage each day on its own terms. In other words, they satisfy the various demands of the day as they are presented; spending whatever time is needed to respond without giving much thought as to the relative value of the activity. This is a reactive approach in which the day is controlling you thus preventing you from performing at your best.



### Time Blocking

The key to successful time use—intentional time use—is not trying to eliminate these unplanned interruptions, but instead to block out regular time each week dedicated to the strategically important tasks. We call this Performance Time and find that it is the best approach to effectively allocating time that we have ever encountered. Performance Time is an easy-to-use system that allows you to operate like the CEO of your business and life by spending your most valuable asset—your time—with intention. It utilizes a simple time-blocking system to regain control of your day and maximize your effectiveness.



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In other news, we are doing our part to help the environment and have instituted a recycling program at our facility. We have also purchased a lapping machine and we still never charge for tooling. Also, as you can see by our ad, we don't just do round washers anymore, we have expanded to different shapes and sizes. As always we are proud to say everything is **"Made In The USA!"**

At Brewster Washers our history is as important as our quality and it keeps us moving forward to be the best precision flat washer, shims, and disc manufacturer while keeping the ideals of our founder in the forefront of everything we do. **"Good, Better, Brewster!"**

For more information on how Brewster Washers can help you, contact us at 973-227-1050, or e-mail us at [info.lm@brewster-washers.com](mailto:info.lm@brewster-washers.com). Alternatively, you can visit us on our website [www.brewster-washers.com](http://www.brewster-washers.com)



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## **DIAMOND FASTENERS HELPS STUDENT BUILD CHALLENGE™ LEGENDS RIDE® CHARITY; BIKE WIN FIRST PLACE!**

The Sturgis Buffalo Chip® is pleased to announce that the Student Build Challenge bike, customized by Sturgis Brown High School Students, won multiple awards during the 26th annual Donnie Smith show March 23 and 24 in St. Paul, MN. The nation's top student built bike took first place for the Full Custom Bagger classification in the Open Class and also won Overall Best Display. The award-winning bike was auctioned off on August 5, 2013 at the Sturgis Buffalo Chip in support of the annual Legends Ride event.

More information can be found about the bike build and the 6th annual Legends Ride at [www.legendstride.com/TheRide/StudentBuildChallenge.aspx](http://www.legendstride.com/TheRide/StudentBuildChallenge.aspx).

Built by a group of dedicated high school students, guided by Keith Terry of Terry Components and Randy and Nick Cramer of Dakota V-Twin, with parts donated by world class contributors, the Student Build Challenge Legends Ride bike is a custom work of art like no other. In a complete tear down

and rebuild, the Sturgis, SD students customized a stock Road King Harley Davidson that took top honors at the bike show. Their work will be showcased in a feature issue of American Iron magazine set to hit newsstands in July

"Entering the Legends Ride Bike and winning multiple awards at the Donnie Smith Show is an accomplishment in which these students can truly take great pride," stated Rod Woodruff, owner of the Sturgis Buffalo Chip Campground. "It's a dream come true. The Buffalo Chip has a tremendous appreciation for Keith Terry, Randy and Nick Cramer of Dakota V-Twin, the very progressive-minded administration and teaching staff at Sturgis Brown high school and all the amazing sponsors who made this high school mentorship dream a reality."

The Sturgis Buffalo Chip's Student Build Challenge is

a bike build mentorship program that works each year with local high school students, teachers, industry veterans, and sponsors to create a unique custom bike. The next stop for the award-winning custom Road Glide will be the 25th annual Black Hills Motorcycle Show held April 13th and 14th at the Rushmore Plaza Civic Center. From the show, the bike will become the centerpiece of the Buffalo Chip's Legends Ride where it will be sold to one lucky bidder at a special sponsor auction to support the event.

The Legends Ride will take place on Monday August 5th, where riders can join celebrities for a ride that has raised over \$260,000 for local charities since 2008. 100

percent of riders' fees are donated to the Black Hills Special Olympics and Sturgis Motorcycle Museum. The Legends Ride® contribution includes admission to the Buffalo Chip Campground where Kid Rock and other concert performances will immediately follow conclusion of the Legends Ride and

reception. The ride takes place during the Sturgis rally, starts in Deadwood and ends at the Legendary Buffalo Chip. Information on the build, the sponsors, and the ride are available at [www.LegendsRide.com](http://www.LegendsRide.com).

A special thanks to all sponsors who made the 2013 Student Build Challenge bike build possible. Sponsors include Arlen Ness, Baggster, Black Hills Harley-Davidson, Black Hills Plating & Polishing, CP Carrillo, Dakota Digital, Danny Gray Seats, **Diamond Fasteners**, Dimension Custom Paint & Body, Fueling Parts, Handy Industries, Hawg Halters, Hawg Wired, Hot Leathers, Legend Suspension, Paul Yaffe's Bagger Nation, R.C. Components, Sinister Industries, Thunder Cycle Design, Thunder Max Performance, Trask Performance, Jacob Van Kampen, and Vee Rubber America. 



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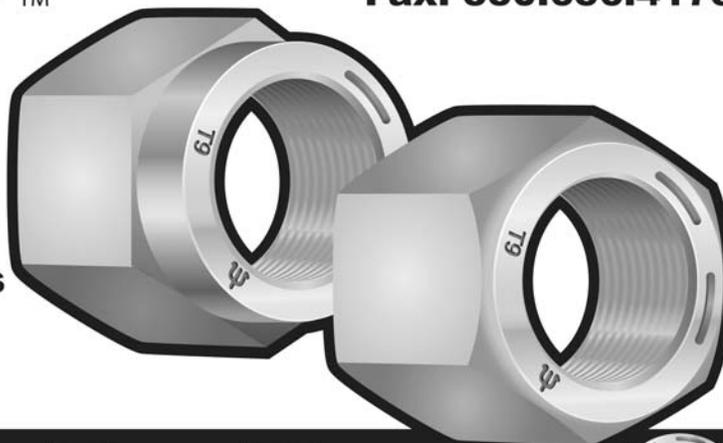
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**AMERICAN FASTENER MAKERS: WHAT "RESHORING" MEANS TO YOU** *continued from page 30*

Executives dissatisfied with the status quo and worried it might become the status woe take five steps to rectify it, because experience has taught them that pop psychology best sellers like "The seven secrets for this," or "The five fast shortcuts to that," or "The three quick steps to whatever" or are no substitute insisting upon better organizational performance. They understand customers will purchase their specialty fasteners again from domestic producers – from them – because they can make quicker deliveries of competitively priced product than their foreign competition.

### ***Five Steps to Profit From "Reshoring"***

Fastener industry executives can benefit from the "reshoring" trend by taking the following five steps to create a sense of urgency to cut costs, improve competitiveness, and boost profitability:

[1] The first step is to conduct an external market survey, assessing the strengths and weaknesses of competitors and the prospects of the industries they serve. This will show where their greatest opportunities are and what is needed to take advantage of them.

[2] The second step is to conduct an internal survey of their own costs and productivity to identify what inefficiencies exist within their own organizations and what bottlenecks are stifling throughput. This will tell them how to increase internal efficiencies in order to take advantage of the opportunities that await.

[3] The third step is to conduct development programs for senior managers to teach them how to focus their activities on meeting the long-term goals needed to take advantage of future opportunities. In special training sessions, senior managers can be shown how to focus their activities on major company goals so they can concentrate on critical matters while delegating the hum-drum to the back-office. Properly trained executives can then use their time to coordinate the different disciplines within their companies – engineering, R & D, marketing, finance, production, and human resources – to cut cycle times for engineering, tooling, and producing fasteners of all kinds at ever lower costs. In short, to insist on rapid execution of short term goals.<sup>3</sup>

[4] The fourth step to develop a cadre of first line supervisors by training them to understand the difference between busyness and effectiveness. Doing

so will teach them how to meet and beat their short term efficiency objectives needed to meet the organization's overall goals. Rather than focusing on managing the behavior of their workers, first line supervisors need to learn how to manage the work of their employees. Traditional supervisory training that merely advocates panaceas like "praise in public and criticize in private," and similar simplicities no longer suffices. Ability to apply Constraint Theory, real-time scheduling to coordinate the work from the cut-offs and straighteners to the cold-headers and packaging departments to reduce down-time, and in lean manufacturing techniques, for example, will be required.<sup>4</sup>

[5] The fifth step is to generate employee cooperation in meeting company efficiency standards by developing and implementing motivation/compensation systems to reward workers for better day-to-day productivity and improved quality output.<sup>5</sup>

By identifying and focusing on future markets with the greatest potential, by training managers and supervisors to be more effective and efficient, by using costing systems to identify and shed marginal products and customers, by cutting costs, and by motivating employees to improve productivity by rewarding them through motivation/compensation systems like a Gainsharing program<sup>6</sup>, which enables a company to tell its employees precisely how their daily activities affect their month-end Gainshare bonuses and often results in double digit productivity gains. These efforts empower aggressively managed fastener makers to take advantage of the "reshoring movement" and reestablish themselves as low-cost domestic suppliers whose deliveries are quick and dependable.

**...The "Reshoring" Trend: orders once sent to foreign fastener producers, often in Pacific Rim countries, but now returning due to rising Far Eastern labor costs, fluctuating foreign exchange rates, and logistical difficulties.**

### ***What is Reshoring?***

Reshoring is the reverse of out-sourcing, which in itself has a long history.

Outsourcing first began in Detroit as the "Big Three" – General Motors, Ford, and Chrysler – tried to escape their expensive United Auto Worker contracts by becoming mere assemblers of parts (brakes drums, manifolds, seat frames, and specialty fasteners to attach trim, etc.) made by lower-cost outside suppliers rather than continuing their previous practice of bolting together with specialty fasteners they made in-house the components they also made they made in-house into the finished cars they drove off the assembly line.

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### What's New At Beacon?

Beacon continues to grow and expand its product offering and now stocks 18-8 stainless 6-Lobe 48-2 Thread Forming Screws for Plastic applications. Beacon is also working with Insxql on a direct connect feature for those customers who already

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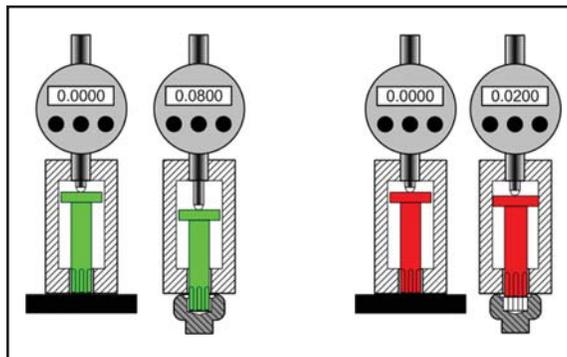
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## FASTENER DRIVE SYSTEMS NEED TO BE CHECKED *by Larry Borowski President*

The quality of a fastener drive system can have a major impact on assembly efficiency and end product integrity. The quality of the threads may be perfect, but if the drive system is improperly formed, the fasteners may not install at all or may have so poor performance that they cannot be fully tightened. When you can't drive a fastener correctly, it can affect everything from assembly rates to service, and potentially liability issues in the field. A "Drive System" is more than just the recess or the head; it includes the threads and the mechanism used to do the driving. We will just be dealing with the recesses in this article. The following are typical questions that we see regarding the quality of a fastener drive system:



### *Are There Ways Of Inspecting The Drives On The Fasteners Themselves, And If So, What Should Be Checked?*

Yes, there are proper gages and methods for inspecting all shapes and sizes of fastener drive system. Some of the most common are:

1. Slots – Slotted drives have requirement for width and depth. There are specific gages for inspecting both features quickly and effectively.
2. Type 1 (Phillips), Type 1A (Pozi), Type II (Frearson) - This group is often referred to as the Cruciform (cross) recess. These designs are to be

inspected for total recess depth, penetration depth, and wobble. Most critical are the recess penetration depth and wobble to insure that these will drive properly.

a. Penetration Gages will measure penetration depth to indicate whether or not the correct recess shape has the proper depth. Too deep can result in heads popping off during install, and too shallow can result in recess stripping.

b. Wobble gaging will measure how tight the shape is. The depth may be good, but too much wobble can result in stripped recesses during installation.

3. Hex Socket Recesses – Hex recesses are to be inspected using Go and NoGo Hex plug gages to insure proper size. They should also be inspected for recess

penetration depth, to insure proper key engagement.

### *Is Checking Wobble In Cross Recesses And Square Recesses Really Necessary?*

Yes, as stated above, recess penetration depth may be within specification, however the parts may not drive properly because they are too loose or have excessive wobble. Cross recesses and square recesses are the only drives that require a wobble check. This can also be termed the "degree of looseness." There are precision plug gages made specifically for checking this feature on cross recesses as well as square recesses.

*please turn to page 234*



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**AMERICAN FASTENER MAKERS: WHAT "RESHORING" MEANS TO YOU** *continued from page 208*

The old "Big Three" (which uses about 33% of the fastener industry's production) spun off their parts subsidiaries into independent suppliers in the hopes they could negotiate lower labor costs with the UAW.

This practice soon spread to the off-highway construction and agricultural equipment industries (which takes another 25% of the industry's output) to aerospace and industrial machinery (which use another 25% of all fasteners) and as well as consumer durable makers producing refrigerators and stoves (another 10% of fastener output). Companies hoped they could reap huge savings by buying parts made by low cost domestic suppliers not hobbled by restrictive union contracts... or even by unions at all.<sup>7</sup>

When that didn't work out so well for them, the Big Three then rationalized that since they sold cars globally, they should also search the globe for low-labor cost suppliers of the components they fastened together, here in their domestic assembly plants. Other OEM's followed suit. Soon, a universal chase was on for areas or countries with the lowest labor costs.

Jack Welsh, legendary Chairman and CEO of General Electric, semi humorously claimed the ideal location of an international company's factories would be barges that could be floated anywhere to take advantage of favorable exchange rates and low-cost labor. But because of rising foreign labor expenses, foreign currency value fluctuations, and logistical nightmares, many casting purchasers are now rethinking previous decisions to buy them from low labor cost, off-shore suppliers for use here.

**Inertia can best be identified when executives and owners send the message through their organizations by their actions and inaction that good enough is good enough, despite below average results.**

### **When And Where Did "Offshoring" Start?**

"Offshoring" started in the late 60's with Mexico's maquiladora program. Under it, factories built in a maquiladora free trade zone along the Mexican-American border could import American-made parts and components without tariffs, assemble them into finished products, and then ship them back to the United States, paying duties only on the value-added by inexpensive labor.<sup>8</sup> Spurred by the North American Free Trade Agreement of 1994, maquiladora output by the end of the century accounted for about 25% of Mexico's Gross Domestic Product.

As wages rose in Mexico, American companies looked further afield to Guatemala and other Central American nations for lower-labor costs so finished products could be made (apparel, for example) or assembled (small

consumer appliances) cheaply. This trend morphed into exporting the entire production of labor-intensive like shoes, apparel, toys, small appliances, electronics and all types of computers and peripherals to foreign countries with cheap labor and then shipping finished goods back for domestic customers.

Then, as Central American wages climbed due to higher demand for low-cost labor, American manufacturers looked overseas for low labor-cost suppliers. They found them in Pacific Rim countries like Korea, Taiwan, the Philippines, and finally, Mainland China.

### **China Today**

China today still suffers from the Mao Zedong's early efforts to consolidate Communist Party rule in the 1950s, his simplistic efforts to speed industrialization, and his desires to maintain the theoretical underpinnings of socialism. These include:

- Mao's "Great Leap Forward" of 1958, which collectivized private farming in an effort to boost food supplies enough to feed industrial workers in urban areas.

Like Stalin's forced collectivization of Ukrainian agriculture in the late 1930's,

Mao's leap stumbled, resulting in famine as tens of millions of Chinese starved. The results were so clearly negative that they helped more moderate Communist

party leaders like Deng Xiaoping and Liu Shaoqi to gain influence.

- Mao's Cultural Revolution in 1965, which was an effort to eliminate "revisionism," and reinforce basic principles of Communism to create a classless society in which peasants, workers and educated classes would work together for the common good. Groups of "Red Guard" students banded together to denounce all whose thinking differed from Mao's. They created such social chaos that Mao's authority was again challenged by moderates Zhou Enlai and Deng Xiaoping, who used their influence to return to normal life in 1968.

- Mao's hukou system, which was a way to control internal migration by household registration. Everybody was forced to register at their place of birth for a location certificate, on which were based social benefits like land distribution, school admittance and medical insurance. Deng Xiaoping subsequently softened this effort in the 1980's, allowing more rurals from the interior to migrate to the coastal Special Economic Areas, bringing a surfeit of cheap labor to the growing export industries in Coastal areas.<sup>9</sup>

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**61st GOLF OUTING SNEAKS IN BETWEEN RAINS** *continued from 146*

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  - Nylok (Cocktail Hour)
- Solution Industries provided the first place trophies and the longest drive regulation bat.

We greatly appreciate the hard work of the Golf Outing Committee for getting all of this coordinated as another successful event for the MWFA: Rich Cavoto (chairman), Bob Baer, Brian Christianson, Bob O'Brien, Becky Russo, Bill Vodicka, Wayne Wishnew

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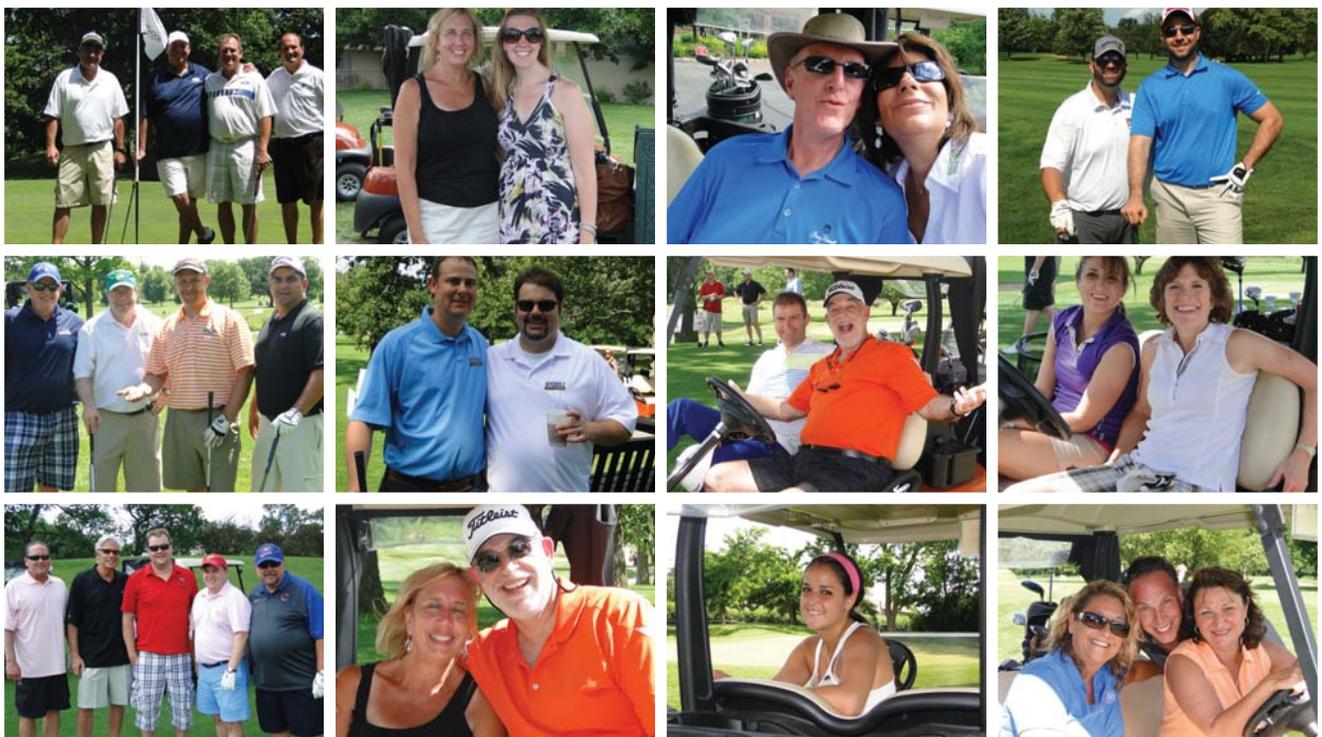
- September 12th Introduction to Fasteners Seminar  
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- September 19th Arlington Park Track Outing  
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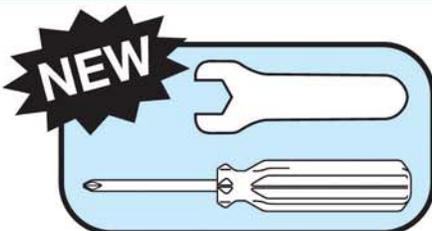
The show will be at Belvedere Banquets in Elk Grove Village, IL. A room block is available at Country Inn & Suites (847-985-0101) connected to the Belvedere. Room rate of \$92 includes breakfast, airport shuttle and free WIFI. 

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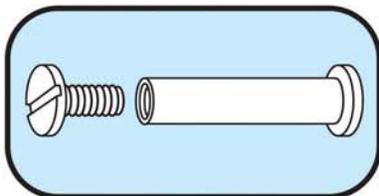
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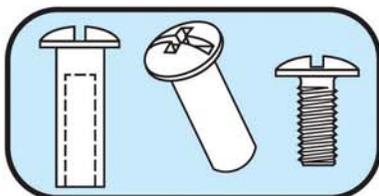
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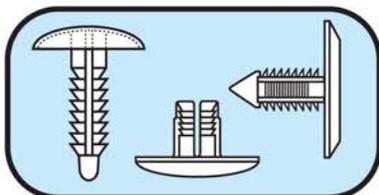
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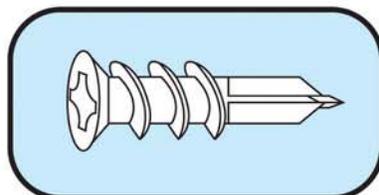
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**AMERICAN FASTENER MAKERS: WHAT "RESHORING" MEANS TO YOU** *continued from page 212*

• Deng's "one-child policy," which was an effort begun in 1979 to slow the rise of China's population which had grown to about 963 million in 1978 from 552 million in 1950. Each woman was allowed just one child; above quota births were heavily fined if not aborted forcefully. This policy led to a temporary "demographic dividend," i.e., an extremely high percentage of the population in its prime working years. The working population (age 15-64) increased from 59.3 % of the population in 1980 to 74.4% in 2011 as China urbanized. Today, that population is aging, and the social safety net for the elderly is weak. Of the roughly 185 million Chinese over 60, some 22.9%, or 42 million, live in poverty, as compared to 8.7% of Americans over 65, where the safety net of Medicare and Social Security is much stronger.<sup>10</sup> China has made little current effort to address this problem, which will return to haunt the nation in coming decades.

China's economic scene gradually changed, starting in the late 1970s, due to four trends:

- The "household responsibility system" in rural provinces, where local governments allowed farmers to sell some of their crops at free-market prices. Since

man seems to be "hard-wired" to be acquisitive, this practice gradually spread nationwide in the early 1980s.<sup>11</sup>

- The industrial reform at a local level whereby enterprises owned by municipal and provincial governments were allowed to begin producing and marketing goods for sale at market-driven prices in local areas.

- The gradual transition from state- to privately-owned enterprises, as "hard-wired" individuals acted as entrepreneurs, making and selling a wide variety of goods nationwide. In short, this was the beginning of a national private economy operating sub rosa along side with the large state owned enterprises, many of which were woefully inefficient.<sup>12</sup>

- The establishment of "Special Economic Zones," in Guangdong and Fujian provinces as well as Shanghai and other coastal cities, in which free-market was encouraged, as Communist Party leadership looked the other way.<sup>13</sup>

Under the leadership of Deng Ziaoping in 1980's, China gradually liberalized its economy, although political power remained a Communist Party monopoly. Although relaxation of Party political control was the subject of much internal debate, hardliners finally won the argument when the Tiananmen Square demonstrations erupted in May, 1989 for political reform and an end to Party corruption. Martial law was declared in Beijing, followed by troops and tanks. The June 4 crackdown killed hundreds

of demonstrators.<sup>14</sup> To this day, the Communist party maintains political control and ideological purity at a national level while turning a blind eye to the regional emergence of a market-driven, capitalistic economy based on exports. Chinese leaders now face a dichotomy: how a Communist central government, so repressive that early 20th Century Lenin would be proud of it, can maintain political control in an open-market (or semi-open, at least) economy which has propelled much of China into the 21th century industrially. No repressive government in modern history has made that transition...and survived intact.

### **Wages and Population**

All this turmoil has created lasting deleterious effects. Because of the still extant "one child rule," the temporary demographic dividend has ended, and the growth of China's prime-age labor force has slowed considerably, causing wage inflation, hurting exports, and threatening the rising standard of living that has kept the masses more or less satisfied and the repressive Central government in power.

Until recently, an abundant supply of unskilled and semi-skilled labor supply drawn from the agricultural provinces of interior China and long hours demanded of urban employees in Coastal manufacturing areas have proved quite beneficial to economic growth. But today, labor shortages now exist in some of the coastal special economic areas, especially the Pearl and Yangtze River Deltas as well as other vital industrial areas keyed to export markets. This shortage also helps explain the current wage explosion in China.<sup>15</sup>

As offshoring accelerated in the 1990's in Mainland China, its government closed its eyes while citizens in coastal Special Economic Areas organized profit-seeking companies to make parts, components, and fasteners for export. These exports fueled a rising standard of living which enabled the Communist Party keep control. Local and provincial political leaders welcomed the chance to become "silent partners" in many of these companies, proving that greed, political payoffs and bribery are not just Chicago politics, but world-wide phenomena.

Chinese wage levels in 1978 were about three percent of those then in America, and much lower than the pay in neighboring countries such as Thailand and the Philippines.<sup>16</sup> Since labor costs in China were still a small fraction of those here in the 1980's and '90s, American fastener users abandoned domestic sources and began importing their fasteners from Taiwan and Mainland China for use here.

**Executives understand customers will purchase their specialty fasteners again from domestic producers...because they can make quicker deliveries of competitively priced product than their foreign competition.**

**WORK WITH INTENTION: THE 3 COMPONENTS OF PERFORMANCE TIME** *continued from page 198*

There are three primary components of Performance Time: strategic blocks, buffer blocks, and breakout blocks.

**STRATEGIC BLOCK** - A Strategic Block is a 3-hour block of uninterrupted time that is scheduled in advance. During these blocks you accept no phone calls, no faxes, no e-mails, no visitors - no mental interruptions. You focus all your energies on the preplanned items - the strategic and money-making activities. Doing so concentrates your intellect and creativity and produces breakthrough results. You will be astounded by the quantity and quality of the work you produce. For most people, one strategic block per week is sufficient.

**BUFFER BLOCK** - Buffer Blocks are created to deal with all of the unplanned and low-value activities—like most email and voicemail—that arise throughout a typical day. Almost nothing is more unproductive and frustrating than dealing with constant interruptions, yet we've all had days when unplanned items dominated our time.

A Buffer Block allows you to take what would otherwise

be inefficient activity and make it more productive by grouping it together. In this way you can handle each item expeditiously and move through the list with some momentum. This allows you to stay focused throughout the day on the important activities.

For some, one 30-minute buffer block a day is sufficient, while for others, two separate one-hour blocks may be necessary. The power of buffer blocks comes from grouping together activities that tend to be unproductive so that you can increase your efficiency in dealing with them and take greater control over the rest of your day.

**BREAK-OUT BLOCK** - One of the key factors contributing to performance plateaus is the absence of free time. So often, entrepreneurs and professionals get caught up in working longer and harder. This approach is an energy and enthusiasm killer. To achieve greater results what's necessary is not more hours. On the contrary, often it is more free time.

**Even in this era of innovation and technological advancement, time, more than any other resource, is the limiting factor.**

*please turn to page 261*

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## SOUTHEASTERN FASTENER ASSOCIATION

# SEFA 2014 SPRING CONFERENCE PLANS UNDERWAY

The next SEFA Conference will be April 9th-11th at the Embassy Suites Charlotte-Concord Golf Resort & Spa.

Be sure to make plans to join us as we are planning a full schedule of informative and fun events. The event starts with our opening Reception on April 9th.

We have already started planning the fun at the Opening Reception, so plan to join us and come race with us!

April 10th will include golf (on site course) and awards dinner. Those not golfing will have the opportunity to enjoy the many local attractions. Guests will enjoy being right next to the Charlotte Motor Speedway and Z-Max Dragway, as well as being near the Concord Mills Mall with AMC Theaters and IMAX, NASCAR Speedpark, Carolinas Aviation Museum and many other attractions.



On April 11th, informative sessions (including a special guest speaker) will be held. These sessions are looked forward to events by attendees. The networking throughout the three days is invaluable. SEFA invites all fastener and fastener related companies interested to book their rooms to allow time to increase the room block if needed.

Room rates are \$149 inclusive of Manager Reception, Internet, Ready to Order Breakfast and Complimentary Parking.

You may book room reservations by either calling the hotel direct at 704 455 8200, calling 1-800-EMBASSY or going online [www.embassysuitesconcord.com](http://www.embassysuitesconcord.com) and entering the Group/Convention Code: SFA.

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## DISTRIBUTOR NEWS

### Würth Service Supply

has recently moved its Rock Island, IL. branch to a new location nearby. The move will allow the business unit to better manage inventory and serve customers, while remaining in close proximity to all existing accounts.

While both the previous building and the new facility are comparable in size at 12,000 square feet, the layouts are very different, making a large difference in the work flow processes. "The difference between the two locations is that the old building was built as a multi-tenant building with dividing walls and low ceilings," says Business Manager, Lance Boeken, "the advantage now is that we have a better flow and racks can be built higher to accommodate additional inventory, allowing the process of receiving and shipping inventory to be much more efficient and productive."

The new warehouse has an additional lift truck and picker to increase productivity. The ability to better use the warehouse space will allow the branch to support additional business as the company grows. The branch hosts seven employees and is the home branch for two of the company's Key Account Managers, working primarily with the Agricultural Machinery Industry and the Construction Equipment Industry.

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## DISTRIBUTOR NEWS

**Industrial Rivet & Fastener Co.** a global manufacturer, distributor and importer of quality rivets and fasteners, has announced its recertification to ISO 9001:2008. The ISO triennial re-assessment audit completed mid-May extends the organization's certification through 2016. Obtaining this certification solidifies Industrial Rivet & Fastener's mission to provide quality control and assurance of conformity to their customers.

The International Organization for Standardization (ISO) publishes the standards related to quality management systems that are designed to help organizations ensure that they meet the needs of customers and other stakeholders. The goal of the ISO certification process is the development of

fundamental quality systems that provide for continuous improvement, emphasizing defect prevention and the reduction of waste and errors in the service process.

"Our company's key values are to deliver exemplary service, a superior product set, ongoing innovation and unmatched quality to our customers," stated Joanne Sherman, Secretary/Treasurer of Industrial Rivet & Fastener Co. "Staying true to these values is something that has been vital in the development of Industrial Rivet and passing the recertification with flying colors is a testament to this commitment," concluded Sherman.

For more information, contact Industrial Rivet & Fastener Company by calling toll-free 1-800-289-7483 or visit their website at [www.rivet.com](http://www.rivet.com).

**AMERICAN FASTENER MAKERS: WHAT "RESHORING" MEANS TO YOU** *continued from page 216*

Since the law of supply and demand knows no boundaries, the flood of first commodity and subsequently specialty fasteners exported to foreign customers outgrew the supply of skilled labor in China's "special enterprise" zones located in coastal provinces. Wages shot up, far faster than in neighboring countries. From 1998 to 2010, the average growth rate of annual wages there was 13.8%. This was much higher, says the International Labor Organization, than regional wages in other Asian countries, which rose by 7.1 to 7.8% yearly between 2000 and 2008. Pay in Western, advanced nations rose by 0.5% to 0.9% in the same period.<sup>17</sup> These narrowing differentials have made it increasingly difficult to justify importing specialty fasteners of most types from China.<sup>18</sup>

Factory owners in the Coastal Zones made great efforts to bring workers from the poverty stricken inland provinces in a great internal migration, despite the hukou system. But all good things come to an end. Since Chinese pay levels climbed faster than productivity, labor became more expensive for employers, decreasing the labor cost differential between China and Western nations. Indeed, China's labor cost differential compared to Korea and Malaysia will totally evaporate by 2018 and 2022, respectively.<sup>19</sup> China's fastener makers face a difficult future, given their rising labor costs, the time and cost of trans-Pacific shipping, and the rising value of their currency, the Yuan.<sup>20</sup> Indeed, the output of metal fasteners of all types dropped 4.72% in January/February, 2012 from the previous year's like period.

### Currency Valuation

While China doesn't float like Welch's barge, that nation's government has a long history of manipulating the value of its currency in order to boost exports.

The appreciation of the yuan has created more difficulties for China's export industries, now bedeviled by rising labor costs. China's past economic success has been due not only to cheap labor, as we have seen, but also to an artificially low, fixed exchange rate of the yuan vs. the dollar. Washington and the European Community have railed for years about the undervalued yuan, saying it causes the large trade imbalance and adds to high domestic unemployment rates in the US and Europe. At the start of economic liberalization in the late 1970s, the percentage of China's GDP that was exported was about 5 percent. By 2006, that had grown to about 40%, generating a large trade surplus. That should have raised the

international value of the yuan, but Chinese governmental intervention maintained its low international value in the world's financial markets in order to promote exports.

Here's how comparative purchasing power of the yuan vs. the dollar works. Say a 20 KG. keg of stainless steel automotive trim clips costs 100 yuan to produce in China, and a similar one cost US\$25 to make in America. Then one dollar would be worth four yuan, at least in terms of trim clips. If the value of the yuan appreciates, rising say 25% to 3 yuan to a dollar, then a Chinese keg of these clips would cost US\$31.25. Obviously, buyers at American automakers (the largest fastener users) could purchase fewer Chinese kegs of clips with their dollars, and domestic specialty fastener makers would not be so hard pressed to beat the "China Price" their Detroit customers are always cite. Fewer auto makers would buy their fasteners – or anything else – from Chinese suppliers and ship them back to America.

China has been forced to allow the value of the yuan to increase due to international pressures, causing the cost of China's exports to increase for foreign purchasers. Because of the higher value of the Yuan, the goods produced there are more expensive than before when purchased in the US with American dollars. Since so much of Chinese manufacturing is geared to exports, the rising value of the yuan is creating higher unemployment there. Eventually, this will threaten China's rising standard of living which has enabled the Communist Party to maintain political control. This raises the specter of the widespread social unrest so greatly feared by the Chinese government.

**Companies hoped they could reap huge savings by buying parts made by low cost domestic suppliers not hobbled by restrictive union contracts... or even by unions at all.**

### Social Controls

China's one-child rule reduced the supply of young cheap labor while the demand for cheaply priced exports increased the demand for it. To control greatly feared social unrest, the Chinese government started the Great Firewall in the late 1990's to block foreign websites like Facebook, Twitter and YouTube.<sup>21</sup> The Chinese government does allow domestic ones like Taobao, Alibaba and Baidu to flourish, although under tight government scrutiny intensified by the 1998 creation of the Golden Shield for domestic surveillance. Comments and postings by civic-minded microbloggers are filtered, letting them to focus their attention only on local problems like pollution,<sup>22</sup> food safety,<sup>23</sup> and local industry<sup>24</sup> but suppressing critical comments about the central government that might foment widespread collective action, social unrest, protests, and public demonstrations.

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**AMERICAN FASTENER MAKERS: WHAT "RESHORING" MEANS TO YOU** *continued from page 220*

With few rights, workers find themselves housed in giant company-owned dormitories in the Pearl River Delta near Shanghai and other Coastal manufacturing megalopolises where they work 80+ hour weeks in unhealthy conditions. Industrial accidents have killed more than 70,000 a year in 2011 and 2012.<sup>25</sup> Growing prosperity has created an era of rising expectations that China's repressive regime has been unable to throttle entirely. Highly regimented factories, low wages, and 80-hour workweeks have led to unrest, strikes,<sup>26</sup> riots, and even waves of suicides.<sup>27</sup> Moreover, adverse publicity about poor working conditions, child labor, and worker suicides is causing American companies selling branded consumer goods like Nike and Apple to insist that suppliers and subcontractors improve pay and working conditions.

### **Other Causes Of "Reshoring"**

Additional reasons why "reshoring" is growing are more difficult to quantify.

One reason "offshoring" has declined has been the difficulty communicating typical business information engineering change orders, invoices, shipping instructions, product specifications - half way around the world across a dozen different time zones.

A second reason is that many American companies see innovation suffering when engineering and R&D facilities are kept here while manufacturing was moved to the Far East.

Yet a third reason is corruption - the threat of losing intellectual property to counterfeit good makers in countries whose respect for patents and contracts were nil. The amount of "knock-off" goods, from electronic consumer goods, drugs, luxury fashions, toys, to industrial products like airplane and automobile parts coming from China is huge.<sup>28</sup> The list is endless, ranging from one Chinese firm's heavy cast steel train wheels which the US International Trade Commission recently banned when it determined the company used stolen US trade secrets to make them,<sup>29</sup> to the flood of lightweight fake Zippo cigarette lighters which Zippo Manufacturing Co. says equals the annual 12,000,000 lighter production coming from its Bradford, PA plant.<sup>30</sup>

Nor is the Chinese government an idle bystander. One observer said "stringent protection of foreigners' intellectual property is at odds with China's development strategy."<sup>31</sup> Foreign firms operating in China complain that Beijing views the appropriation of foreign innovations as part of a policy mix aimed at developing domestic technology and production.<sup>32</sup>

A final reason why "reshoring" is growing is political - unemployment rates in the US have not receded much from their peaks during the Great Recession of 2007-2008, making many companies sensitive to the charge of sending "American jobs" offshore. During the 2012 election campaign, Obama flailed Romney for sending thousands of jobs overseas when he ran Bain Capital, a hedge fund, while Romney blamed Obama for allowing Chrysler, whose bankruptcy was fast-tracked by the government, to plan Jeep production in China.

Narrowing differentials in labor costs, communication difficulties, and dodgy business practices have reduced the appeal of "offshoring." Even Mainland China companies have joined American ones in a continued search for low labor cost sites in Malaysia, Indonesia, India and other areas, but find skill levels low and infrastructures inadequate.<sup>33</sup>

The appreciating value of the Chinese yuan has increased the cost to American fastener buyers of China product - ranging from industrial users of specialty fasteners of all types to do-it-yourselfers buying commodity fasteners at their local hardware stores.

Add to this the rising labor costs in China's special economic coastal areas, the theft of intellectual property, and the cost and time to ship heavy kegs and containers of fasteners across the wide Pacific. All have all contributed to the "reshoring" movement. True, leading companies like General Motors, and Caterpillar built factories in Mainland China, Brazil, and elsewhere to "homeshore" their products in the growing markets in those nations, and some fastener makers have followed suit.

McLean-Fogg and Fastenal, for example, both have Far Eastern facilities, serving local markets there as well as exporting product back to the United States. Penn Engineering & Manufacturing Corp. (Danboro, PA.), with locations in Singapore, Shanghai, and Kunshan, China, as well as other Far Eastern nations, does likewise. Other fastener makers, like Continental Midland and Wrought Washer Manufacturing Co., never left America. They focused their efforts here continue to strive successfully for increased efficiency.

But the import of foreign-made specialty fasteners to America used to assemble and sell finished products domestically has fallen and is predicted to continue declining, giving international producers like McLean Fogg, Penn Engineering, and Rotor Clip (Summerset, New Jersey) and others a chance to return jobs to their American locations if they can improve domestic productivity in order to meet the prices demanded by local end users always on the lookout for cheap fasteners.

**One reason  
"offshoring" has declined has  
been the difficulty communicating  
typical business information - change  
orders, invoices, shipping instructions,  
product specifications - half way  
around the world across  
different time zones.**

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## WATCH OUT - STANDARD FORMS ARE GETTING MORE ONE-SIDED! *continued from page 60*

This is a reasonable expectation, but what is reasonable as the standard form agreements begin to grow to 20 and 30 pages of legalese? Who can take the time to read (much less interpret) the fine print, especially where the contract is not of significantly large amounts or importance to the core mission of a company?

Is there empirical evidence that standard forms are getting more complex and one-sided? An article presented at a New York University Law School Conference in July 2012 by Florencia Marotta-Wurgler and Robert B. Taylor reported on a seven year study of mass market consumer software license agreements which showed thirty-nine per cent of the agreements changing terms during the period with the average contract becoming several hundred words longer and more pro-seller in its terms. The changes reflected terms being increasingly used by courts.

Standard form contracts have played an important role in mass markets as they have provided some sense of order and efficiency and have helped to avoid delays inherent in individually negotiating each term of contracts. But these contracts can trick, deceive or hide important details from consumers or even small business buyers

who do not regularly engage in the specific transaction or have the benefit of a high-powered law firm meticulously preparing the agreements. They are often presented with little flexibility or negotiating room to avoid the harsher aspects. Most of the time this is not a problem, but many purchasers have found out to their chagrin when something goes wrong that all of the protection is provided exclusively to the seller. When a party signs on to one of these agreements he or she is quite likely giving up many of the contractual rights which should be a part of a simple purchase.

Business people should take the time to read the fine print. Refuse to sign what you find truly objectionable, find another vendor, and let the offending vendor's sales rep or management know that what they are asking is unfair, and would be perceived by most of their customers as unfair if they truly took the time to understand the contract terms.

Business leaders should not abdicate all of their decisions to lawyers, whether it is in the realm of contract negotiation, personnel decisions, standing behind their products, or meeting their environmental or societal obligations! 

**AMERICAN FASTENER MAKERS: WHAT "RESHORING" MEANS TO YOU** *continued from page 222*

For America's fastener producers, "reshoring" does not mean they can relax, because the OEM's still shop the world for low prices. It does mean that America's fastener makers can take advantage of this trend by redoubling their efforts to become the low cost producers of rapidly delivered, high quality commodity bolts, screws, clips, retaining rings, washers, as well as specialty fasteners used by the consumer durables, automotive and the implement and construction equipment industries.

Astute fastener industry executives understand they must abandon notions of "good enough is good enough," overcome internal inertia, and follow the five steps to success listed above to prevent today's status quo of mediocre profitability from turning into tomorrow's status woe of no profitability.

Forward thinking executives also know the growth of open, free market economies like those in Europe and the New World has always been accompanied by political liberalization and the decline of closed, autocratic rule. That day will come in Mainland China, either by evolution as it did in Britain's "Glorious Revolution" in the 17th Century or revolution as it did in America and France in the 18th Century, and in Russia at the end of the 20th Century.<sup>34</sup>

**For America's fastener producers, "reshoring" does not mean they can relax, because the OEM's still shop the world for low prices.**

Who knows when the safety value in China's boiler of social unrest will pop? After all, it took one faceless Tunisian street vendor, just one, a Mohamed Bouazizi, whose desperate self-immolation after police confiscation of his unlicensed produce stand in December, 2010 to spark the Jasmine Revolution that led to the overthrow of Tunisian President Zine Al Abidine Ben Ali. Seeing success, further uprisings against repressive governments moved all across North Africa, destabilizing the entire region.

Already, there have been anonymous calls for a similar upheaval in China's major cities that have appeared on the quickly-suppressed Boxun.com website. When will a Chinese counterpart come forth, whose fury over the latest episode of contaminated baby food, adulterated milk, pollution, or the most recent industrial catastrophe spark a similar upheaval?

Who knows? But until then, astute American fastener industry executives know that good enough is NOT good enough, that fighting inertia is a constant battle, and that it their never-ending battle to make their factories efficient and competitive in order to survive...and perhaps to prosper. I mean, really, really prosper.

When are you going to start? 

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**WHAT'S THE DIFFERENCE?** *continued from page 34*

Shares of an LLC are easier to put into a trust than an S Corporation. To put shares of an S corporation into a trust, special trusts must be used. It can be somewhat complicated and LLCs tend to work very well instead of S corporations if you want to transfer ownership through a trust.

No unemployment taxes are due on income, unlike both the C Corporation and S Corporation. While this is not a huge tax savings, it is a significant savings. If your business is going to make less than 10,000 dollars per year, LLC's may be the way to go. If you're an at home business, this is particularly important.

During operation of an LLC, profits are taxed only at the shareholder level as opposed to C Corporations, which are taxed twice. However, profits from the operation of the business "flow through" to the income statement of the owner. This does not mean distributions are taxed immediately; the income of the LLC is taxed to the owner within the current quarterly period.

This can be a significant disadvantage if the LLC does not pay out much in distributions. Owners can find themselves facing large tax bills with out the cash to cover it if regular distributions are not made.

When winding up the affairs of the entity and dissolving, profits are taxed once. Nearly all, if not all businesses will eventually close their doors. Both the LLC and the S corporation offer the owners the chance to close the doors and be taxed only once on the sale of the assets. This is in contrast to C Corporations, which can be hit very hard with taxes upon dissolution of the corporation.

LLCs are becoming more popular. This is because most business owners want a limit on liability, single layer taxation, want to limit the formalities and still enjoy the protections. Few attorneys know the advantages of the LLC, but with time, it will be more known.

### ***Subchapter S Corporation***

Profit is not subject to self employment taxes. The self employment tax is 15.3% for those who are self employed and encompasses both Medicare and social security taxes. Normally when a person is employed by an employer, their employer pays half of the tax subjecting the employee to only paying half of the full tax. When one is self employed, they must pay the full tax by themselves.

Under the use of a Subchapter S Corporation, salary (not profit) is subject to self employment tax. However, if the salary is insufficient, the IRS can reclassify the profits as a salary subjecting them to self employment taxes.

This is in contrast to LLCs. While operating under an LLC, both salary and profits are subject to self employment taxes. For people with incomes below the social security threshold amount, this can result in a significant amount of money being put into Self Employment taxes. Of course this can be good or bad depending on your retirement planning needs and expectations.

Since S Corporations are flow through entities, losses can be deducted. This also holds true for the LLC. However, this is in contrast to C Corporations in which shareholders cannot deduct losses. If an S Corporation is experiencing losses, it can deduct the losses and the

owner will recognize the loss on his or her income statement leading to a lower tax liability.

However, there is a limit. You cannot deduct amounts that exceed your investment and loans to the company.

During operation of an S corporation, profits are taxed only at the shareholder level as opposed to C Corporations, which are taxed twice. Just like with the LLC, the profit, not the distributions are taxed. This can be good or bad depending on the situation.

When winding up the affairs of the entity and dissolving the business, profits are taxed once. This is in contrast to C Corporations, which can be hit very hard with taxes upon dissolution of the corporation. As stated above, all businesses close their doors and their assets are sold at one point or another. With an S corporation this transfer is only taxed at the shareholder level.

Of less importance, the franchise fee and start up filing fees that S Corporations pay are substantially less than that of LLCs. Generally S Corporations will pay in the area of \$25 per year in fees and LLCs can pay \$300 - \$500 per year.

### ***Subchapter C Corporations***

Even though C Corporations are taxed once at the corporate level and then at the shareholder level, certain tax advantages can come into play due to new tax legislation..

**There is no one "be all, do all" separate entity for the business man or woman. Each entity has subtle differences which can make a substantial difference to the business owner.**

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1. The act of calling on many suppliers for projection weld screws and nuts when one supplier is sufficient.

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Screws & Nuts

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Arc Studs

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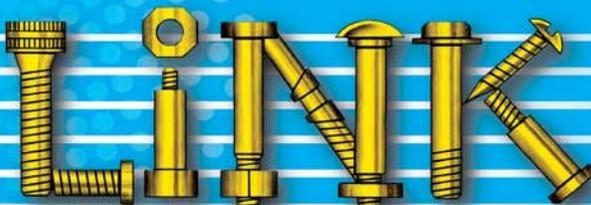
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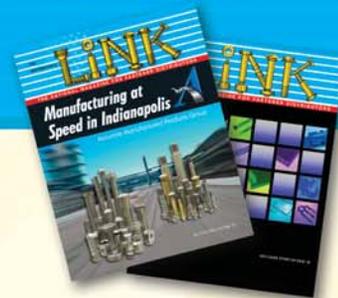
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**WHAT'S THE DIFFERENCE?** *continued from page 226*

Profits from a C Corporation to a shareholder are what is known as dividends, and not distributions. Dividends from C Corporations enjoy a special rate of tax at 15%. This means that money received from a C Corporation, no matter if it is \$1 or \$1 million, every dollar is taxed at 15% and it is not subject to ordinary income tax rates.

At the corporate level, C corporations enjoy lower tax rates than most people do at nearly any income level. If your income is low enough, you may be able to use this to your tax advantage. Generally if the corporations' income is below \$75,000, it can be to the advantage of the corporate holder to use a C Corporation.

Fringe benefits are nontaxable to shareholders of C Corporations. This is in contrast to LLCs and S Corporations where the owners are taxed on the value of the benefits. The fringe benefits are fully deductible at the corporate level, in a C Corporation.

There are no ownership restrictions when owning a C Corporation. Unlike the S Corporation, there are no ownership restrictions for a C Corporation. Nearly any person in the entire world, United States citizen or not, can own the stock. There is also no restriction on the number of shareholders. This works out well for publicly traded companies such as GE, Ford, and GM. Had there been a restriction on ownership in these situations, they

would have lost their status long ago.

Shareholders do not pay self employment taxes on C Corporation dividends. When dividends are distributed, they get taxed at the federal 15% rate and the state tax rates. Medicare and Social Security taxes are not paid on dividends. However, the IRS is fast to reclassify dividends as salary subjecting them to self employment taxes if the salaries are not reasonable.

Shareholders of C Corporations do not immediately recognize income. If you plan on starting a company and not distributing profits, C Corporations are good for this. Otherwise, the shareholder would have a lot of income on their income statement and no dividends or cash to pay the tax bill with. Having a C Corporation allows the business person to accumulate a large amount of profits, reinvest them, etc. and not have to pay taxes at a personal level.

### Conclusion

There is no one "be all, do all" separate entity for the business man or woman. Each entity has subtle differences which can make a substantial difference to the business owner. When deciding which entity type to go with, consider tax and legal aspects to the full extent necessary. 



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**ISO 9001 REVISION REACHES COMMITTEE DRAFT LEVEL** *continued from page 48*

To avoid making a structure change, organizations can develop a cross reference of procedures and methods of compliance from whatever structure they are using to the requirements in the revised standard. It is anticipated that the revised version of ISO 9001 will include a cross reference of existing requirements in ISO 9001:2008 to ISO 9001:2015 (estimated).

If an organization chooses to make a structure change, they should focus on creating a structure that is unique from any standard or governing document or that is easy to change. For example, don't change document numbers, but create a filter in your quality management system that aligns documents with whatever standard you are using. This method can meet the needs of the organization but be more cost effective in managing long term.

Organizations can expect to see other requirements change in the standard as well. It is highly likely that there will be changes to the specific requirements in the ISO 9001 draft. However, it can be anticipated some of the general themes for the revision will carry through until publication. Some of these themes include the following:

### **More Generic**

There has always been feedback that the standard is difficult to apply to all types of industries, specifically the service industry. For that reason, the language in the standard is being modified to make ISO 9001 easier to use for these types of industries.

Currently the CD of ISO 9001 uses the phrase "goods and services" instead of product when specifically referring to the deliverables to the customer.

Another proposed change to make the standard more generic revolves around some of the requirements that were focused on manufacturing industries. Specifically, the clauses related to 7.1.5 Monitoring and Measuring Devices (previously clause 7.6) and 8.5 Development of goods and services (previously clause 7.3). Both of these clauses included very specific requirements for demonstrating compliance. These specific requirements have been removed and made more general to make the clauses easier to implement for all industries.

### **Context of the Organization**

The required high level structure and identical text requires the management system standard to have clauses related to 4.1 Understanding the organization and its context and 4.2 Understanding the needs and

expectations of interested parties. These requirements, while new in the text of the standard, were included in 0.1 General in ISO 9001:2008 which indicated that the quality management system is influenced by the environment that the organization is in, including changes and risks. The new language may cause confusion to users, but the intent is basically the same. One of the concerns with the core text relates to the term interested parties. The interpretation for this phrase is that there is no new requirement to ensure that goods and services meet the requirements of interested parties because this would go beyond the scope of the quality management system. It can be anticipated that steps will be taken in future drafts to make this distinction more clear.

### **Process Approach**

Both the 2000 and 2008 versions of ISO 9001 promoted the process approach in the quality management system. The requirements in 4.4.2 Process Approach (previously Clause 4.1) include specific requirements for adopting the process approach. However, one

might argue that these specific requirements go outside the boundaries of making the standard more generic. The balance between improving the requirements for the process approach while maintaining generic requirements is critical as the standard advances.

**The ISO Technical Management Board has adopted a standardized format and common core text for use in all new and revised ISO management system standards.**

### **Risk and Preventive Action**

The CD for ISO 9001 does not use the term preventive action. This is consistent with the core text from Annex SL. The language in the standard looks at how an organization determines the risks and opportunities that need to be addressed for an effective quality management system. Clause 6.1 Actions to address risks and opportunities includes requirements to make sure that the quality management system can achieve its intended outputs. It also addresses taking action appropriate to the potential effect of conformity to goods and services. This requirement is consistent with traditional requirements of preventive action. However, it is expected that even those organizations that struggled with preventive action will find the concept of incorporating preventive action as a significant change. This change is an opportunity to better align the organization and standard with management philosophies since managing risks is typically the language that leadership uses when making decisions about the organization.

ISO 9001 REVISION REACHES COMMITTEE DRAFT LEVEL *continued from page 232*

## Documented Information

Since the original version of ISO 9001, the terms “documents” and “records” were used. The core text required by Annex SL adopts the terminology of documented information. The business world and the technology used to run it has changed significantly. It is important for the standard to move forward and be consistent with those business changes. In the past, documents and records relied on paper objective evidence. Today the manner in which we control information is typically electronic and the difference between the documents and records is more seamless. There will be challenges to organization since the standard no longer differentiates with the term document or record, and it instead uses documented information in both instances.

Now that the ISO 9001 revision has reached the CD level, comments will be submitted and reviewed by the working group expert. After the review the standard will advance through the following stages.

**DIS** - Once the CD is approved for circulation as a Draft International Standard, the DIS is submitted by

ISO's Central Secretariat in Geneva for formal ballot of the SC2 participating members. (July 2014)

**FDIS** - Once the DIS has been approved we move to the publication stage. The document is finalized by the staff in Geneva and submitted for final ballot to the SC 2 participating members. This stage is generally considered to be a simple check for editing errors and only minor changes and edits can be made. (February 2015)

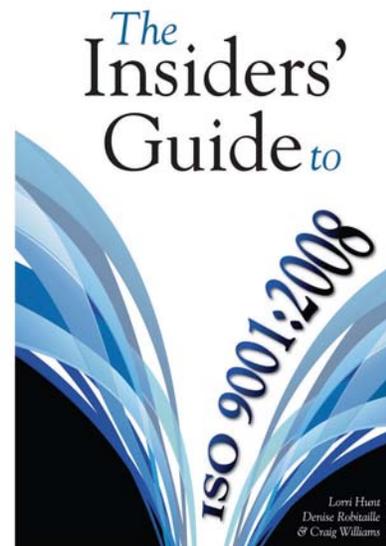
**IS** - After approval of the FDIS, the document is published and provided to member bodies for National adoption purposes. In the USA, ASQ normally adopts these standards as American National Standards as a part of the American National Standards Institute (ANSI) national adoption process. (December 2015)

It is important to note that the final publication of the standard relies on its successful advancement at each specific stage. Estimated dates may shift based on progress and results of ballots. During this timeframe, the International Accreditation Forum will develop any specific guidelines for how organizations that are certified to ISO 9001 will transition to the revised standard. ◻

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The ultimate guide to ISO 9001:2008, written by three leading experts of the U.S. TAG to ISO/TC 176, the group responsible for updating ISO 9001. Includes a clause-by-clause look at the changes. Available at [www.patonprofessional.com](http://www.patonprofessional.com).

**FASTENER DRIVE SYSTEMS NEED TO BE CHECKED** *continued from page 210*

A typical gage configuration is outlined in the ASME B18 standards on tapping screws, and consists of a wobble fixture and appropriate sized wobble plug.

The fastener is held in the fixture, and oriented a particular way. Typically on cross recesses, the “wings” are oriented left-right, and front-back, and on square recesses, the flats are oriented in the same manner. This is called the zero position. The plug is then inserted into the recess, and with a slight downward pressure is “wobbled” left to right. The total degree of movement is indicated by the position of the pointer on the opposite end of the plug relative to the degree plate on top of the fixture. The fastener is then rotated 90 degrees and the test is repeated. A recess can be acceptable in one direction, and non-conforming in the other. A sloppy recess can result in a driver bit not staying in the recess, and will ultimately affect its driving performance. This is especially problematic with longer screws of all types.

### ***Can't I Just Use A Driver Bit To Check Penetration Depth, Fit, Or Wobble?***

No. Although it seems like a logical functional test, recess gages are made to much closer tolerances than driving bits are. Just because a particular drive bit appears to fit well into a recess does not mean that a gage will accept the parts, nor that another driver bit will produce the same fit.

### ***Well, What About The Driver Bits? How Can I Be Sure Those Are Good?***

Driver bits have dimensional specifications just like fasteners do. There are a number of specific gages outlined to inspect these tools. Not only are driver bits inspected for dimensional accuracy, they are also

inspected for torsional strength to make sure they can withstand the appropriate torque to seat a screw.

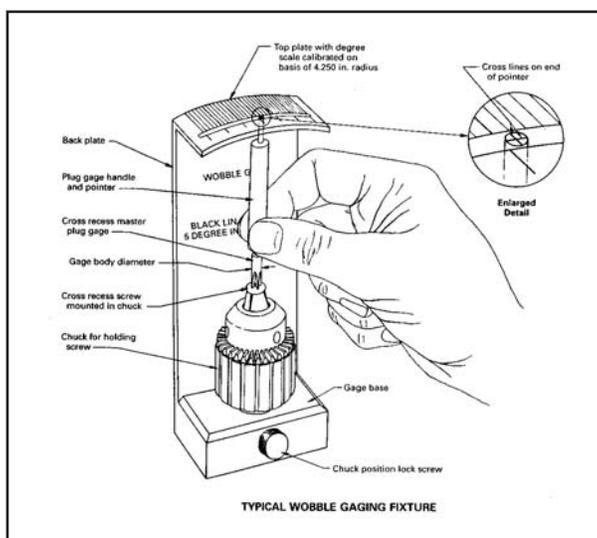
### ***What About “Torx” Recesses, How Are Those To Be Inspected?***

The “Torx” drive system was originally developed and patented by Camcar-Extron. The patent is long expired, but the trademark name still exists, and “Torx” gages are only available through licensees. These drives are also referred to as Hexalobe, 6-lobe, etc. Whatever they are called, they all require the same gaging techniques, and most standards agree very closely as to their size, but you should still make sure to specify which standard you are working to when procuring gages. These drives

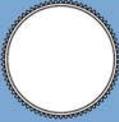
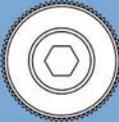
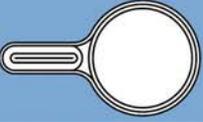
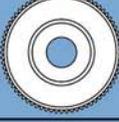
should be checked for basic size using a Go and a NoGo plug gage. In addition to size, just like most other recesses, they need to be checked for recess penetration depth. Something unique to the Hexalobe recess, and a handful of others, is the “fallaway” depth gage. This is essentially a NoGo gage fitted to an indicator to measure how deep it will enter the recess. There is a certain

amount of taper, chamfer, or lead in allowed at the entrance of the recess, and the fallaway gage is used to insure that it does not exceed that amount.

In conclusion, please remember that the fastener drive system is critical to its overall performance. Know what you have and what specifications relate to your product. There are many other recesses out there than what is mentioned in this article, so do your research before making assumptions. You can have perfect threads, but if the drive does not work properly, you have a fastener that will not do what it is intended to....hold things together. 



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<b>LASER</b>	<b>INFO GUIDE SERIES</b> STANDARD OR CUSTOM Knobs are black acetal resin with white engraving	
	     	        

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ARTICLES KING: FEATURE ARTICLES NOW A TOP DIGITAL MARKETING TOOL FOR FASTENER DISTRIBUTORS *continued from page 56*

Other categories of content that had less favorable return-on-investment in descending order were photos, interactive media, sales copy, infographics, illustrations and motion graphics.

Like the Econsultancy/Adobe study, CopyPress also found that for 2013, its marketers identified quality content as the most effective tool for digital marketing.

"From an agency perspective, a lot of service providers have begun offering content marketing services where none existed before," says Dan Tynski, a vice president at Fractl, a content marketing firm and another contributor to the CopyPress study. "There has been a huge shift away from any/all strategies that smell even remotely of black hat. Efforts are being made across the board to stay above board."

Of course, fastener distributors looking to take advantage of the new emphasis on quality feature articles in digital marketing will still need to drop critical keywords into those feature articles. And they'll still need to study how those feature articles are performing with Web analytics, and make adjustments accordingly, according to Web marketing experts.

Plus, fastener distributor marketers will want to find as many ways as possible to re-purpose that content across all the communities where they have a presence. A feature article written for a company Web site, for example, can easily be re-purposed as a press release, and massaged yet again to surface as a post on a company Facebook page, Twitter, LinkedIn and the like.

"Producing and sharing engaging content with targeted communities and influencers is becoming the safest way to increase rankings in Google while promoting your company or branding online," Stevens says.

The clear take-away: the days of throwing a bag of keywords up on an Web site, and seeing what sticks, are over.

"I often talk about the convergence of search, social and content marketing and that's what it is all about,"

says Arnie Kuenn, president of the marketing firm Vertical Measures, and a contributor to CopyPress' study. "Nothing works well in a silo. A good content marketing plan includes many aspects, starting with a strategy and incorporating research, development, optimization, promotion and measurement."

It's also a good idea to follow – or at least consider – Google's own tips for creating the kind of content that is most highly rewarded by the search engine. Key advice

found in Google's "Search Engine Optimization Starter Guide" includes:

**Create content people will recommend:** Users know good content when they see it and will likely direct others to it. These links can come from blog posts, social media, email, forums and the like. Google generously rewards authentic links to your content from these types of third party sources.

**Post only fresh content:** Marketers who post rehashed content, or simply copy content from other Web sites to their own are penalized by Google. Ditto for marketers who post duplicate content on many pages of the same Web site.

**Avoid posting 'seas of text':** A hold-over from the early days of keywords stuffing, seas of text – large swaths of words that feature no paragraphs, sub headings or layout-separations – are penalized by Google.

**Forget keyword stuffing:** Dropping reams of keywords in text – rendering it difficult or impossible to read – is severely punished by

Google. Ditto for dropping in blocks of text like 'frequent misspellings used to reach this page.' The search engine also penalizes marketers that post invisible text that can only be seen by search engines.

**Use descriptive anchor text:** Google rewards anchor text – or the text you use to link to other pages on your Web site and other sites – that is descriptive and easy to understand. Avoid using generic terms like 'page,' 'article' or 'click here.' 



*Above: Google CEO Larry Page is working to reward Web sites with fresh, engaging, original content.*

*Below: Adobe's CEO Shantanu Narayen released a study that found feature articles are a top digital marketing tool for 2013.*



## DISTRIBUTOR NEWS

**Valley Fastener Group, LLC** announces the opening of our new 40,000 square foot Forgo Fasteners Division manufacturing site and distribution warehouse at 5S250 Frontenac Road, Naperville, IL 60563.

The new facility is located just down the street from our 45,000 square foot Aurora, IL Valley Rivet Division. The additional square footage provides for consolidation of our warehouse facilities and extra manufacturing space to support our growth.

The four Valley Fastener Group Divisions consist of Valley Rivet, North Coast Rivet, Forgo Fasteners and the new VFG Adiabatic Precision Cut Division. VFG annually produces and supplies billions of rivets, cold-headed fasteners and specials to the OEM and Fastener Distribution market. The APC Division specializes in the high velocity adiabatic impact production of solid pins and blanks along with cutting of complex shaped coiled wire, rod and bar.

Valley Rivet Division (Corporate Headquarters) and APC Division, PO Box 2790, Aurora, IL 60507.

Forgo Fastener Division, PO Box 2790, Aurora, IL 60507.

North Coast Rivet Division, PO Box 1441, Elyria, OH 44036.

For further information please contact one of our Sales team at 630-299-8910 or visit us online at [www.valleyfastener.com](http://www.valleyfastener.com).

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## DISTRIBUTOR NEWS

**Bisco Industries, Inc.**, the premier national distributor of electronic components and fasteners, is proud to announce the grand opening of our 45th location. This facility is now open and located at 101 Creekstone Boulevard in Franklin, Tennessee. Bisco believes this location will be an immense asset to our infrastructure.

At Bisco, we continually strive to become our customer's "One-Stop Shop" for all of their production needs. Whether they serve the aerospace, instrumentation, circuit board, communication, computer, fabrication, industrial equipment, military or marine industries, Bisco supplies our customer's with everything they need to maintain their daily manufacturing operations. We pride ourselves on providing world-class customer service, sustaining a

huge stock inventory, and keeping a local presence so our customer's receive their orders on time.

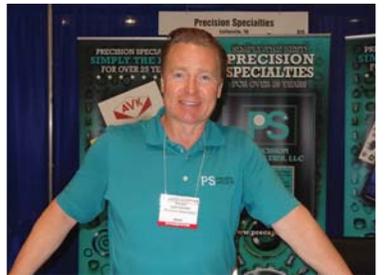
As this will be our first facility in Tennessee, Bisco will now be better equipped to service Nashville and the surrounding areas. It has been strategically placed at this location to optimize our capability of responding to the growing demand of the Tennessee region.

The opening of this new facility is a validation of our hard work and continued growth throughout the years. We will continue to expand and adapt in order to carry on supplying our ever changing industry. The future is bright for Bisco Industries.

To find the Bisco location nearest you, Tel: 1-800-323-1232, email [info@biscoind.com](mailto:info@biscoind.com) or visit Bisco online at [www.biscoind.com](http://www.biscoind.com).

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**FOR THE ZILLIONTH TIME - I DON'T KNOW WHAT TORQUE YOU SHOULD USE TO TENSION YOUR BOLTS** *continued from page 72*

## Here We Go Again

Despite our best efforts, we are still reminded how persistent the torque-tension misunderstanding is. We know a fellow who is working diligently to sell Squirters™ into a new, non-structural application. Achieving proper tension is important to them, albeit at a level slightly lower than 7/8" A325 (30 - 36 kips). He showed them the video, and they thought it was great. Our bolt got 50 kips with 450 ft-lbs. They concluded that they could get 36 kips on their bolts by applying a scaled down torque of 325ft-lbs (= 450 x 36/50). Yet when they tightened their bolts with 325 ft-lbs, they only got 24 kips. What's going on???

What's going on is that all fastener assemblies are not created equal. The situation is best explained by reviewing the short form relationship between torque and tension:  $T = K \times D \times P$  where T is the torque (ft-lbs), K is the dimensionless nut factor, D is the nominal bolt diameter (ft) and P is the tension (lbs). It all comes down to friction, as accounted for by the nut factor. Slippery assemblies can have K factors of 0.12 or lower, and with dry assemblies it can be 0.30 or greater. The table summarizes the situation described above.

	Torque (ft-lbs)	K-Factor	Diameter (= 7/8"/12)	Tension (lbs)
<b>ABT New Bolt</b>	<b>450</b>	<b>0.1234</b>	<b>.0729</b>	<b>50,000</b>
<b>ABT New Bolt</b>	<b>324</b>	<b>0.1234</b>	<b>.0729</b>	<b>36,000</b>
<b>Their Bolt</b>	<b>324</b>	<b>0.1851</b>	<b>.0729</b>	<b>24,000</b>

It turns out that our assembly was more slippery than theirs (K=0.1234 vs 0.1851). By this measure, they are both good assemblies. It's just that ours required less torque to stretch the bolt. They're both good but different.

## For The Zillionth Time....

None of this should be surprising. Friction is a way of life with high strength structural bolts. If you use torque based installation techniques, you're asking for trouble.

I hope my new friends have gotten the message that all fastener assemblies are not created equal. Unfortunately, I suspect they will continue to use a standard torque, but adjust their standard upward to 450 ft-lbs. Good luck!

Of course, we think they should use Squirter™ DTIs. Squirters™ They'll give you desired tension regardless of the condition of the fastener assembly. It's like having a load cell on every bolt. ⚙

**ASTM A193 B7, A194, 2H AND OTHER BOLTING STANDARDS NOW REQUIRE DECARBURIZATION INSPECTION** *continued from page 66*

One thing that was placed in ASTM A962 that has been largely overlooked until recently is the requirement for decarburization testing which became a mandatory requirement for all heat treated material grades; including A193 B7 and A194 2H being some of the most widely used grades. The decarburization requirement states:

**ASTM A962 section 14. Decarburization**

14.1 Depth—The depth of decarburization (total + partial) shall be determined after completion of all heat treatment and shall not exceed the limits shown in Specification A574, regardless of material being tested.

14.2 Test Method—The depth of decarburization shall preferably be determined by metallographic etching. The edge of the specimen shall be suitably prepared to preserve the original heat treated surface. The sample shall be polished, etched with a suitable solution (2 to 5 % Nital if carbon or alloy steel, Vilella's reagent if stainless steel, etc.), and examined under a microscope at 100x using an eyepiece graduated in 0.001-in. [0.025-mm] increments. The measured depth of any light etched band shall be taken as the decarburization depth.

14.2.1 Micro-hardness Testing—When the metallographic etch method of 14.2 renders results that are inconclusive, then the micro-hardness traverse method of Specification A574 shall be employed. The depth of decarburization is denoted by that radial depth where the hardness decrease is more than the equivalent of three points HRA, when compared to the average micro-hardness of the base material at a depth equal to or less than 25 % of the diameter or thickness.

14.3 Alternate—Depth of decarburization may be determined on the threads of components rather than on the starting material.

**ASTM A574, Standard Specification for Alloy Steel Socket-Head Cap Screws** states the following requirement regarding decarburization:

8. Metallurgical Requirement
- 8.1 Carburization or Decarburization:

8.1.1 There shall be no evidence of carburization or total decarburization on the surfaces of the heat-treated screws when measured in accordance with Test Method F 2328 (Class 3 Product).

8.1.2 The depth of partial decarburization shall be limited to the values in Test Method F 2328 (Class 3 Product) when measured as described therein.

**ASTM F 2328** - Test Method for Determining Decarburization and Carburization in Hardened and Tempered Threaded Steel Bolts, Screws and Studs provides the following definitions relative to decarburization:

**3. Terminology**

3.1.2 decarburization in accordance with Terminology F1789, is a loss of carbon from the surface layer of the fastener, normally associated with heat treatment.

3.1.3 gross decarburization also known as complete decarburization, is characterized by a sufficient carbon loss to show only clearly defined

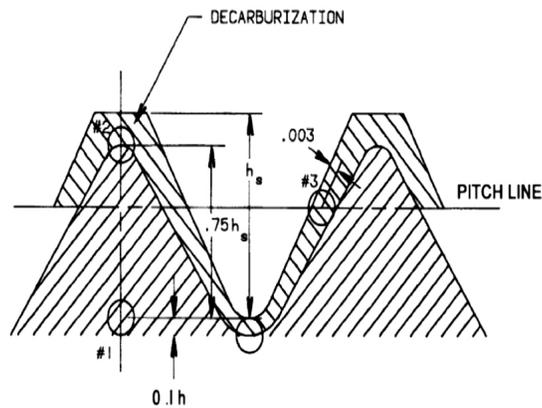
ferrite grains.

3.1.4 partial decarburization—characterized as a loss of carbon sufficient to cause a lighter shade of tempered martensite than that of the immediately adjacent base metal, but as being of insufficient carbon loss to show clearly defined ferrite grains.

According to ASTM F2328 Class 3 products, Position 3 hardness shall be measured at an approximate depth of 0.003 in. from the thread flank at an approximate distance of  $H/2$ , as measured from the plane of the thread root diameter. The position 3 readings shall be taken on the same or adjacent thread and at the same time as the readings at Positions 1 and 2 using the same hardness scale. The long axis of the Knoop indenter shall be aligned approximately parallel with the thread pitch angle at Position 3.

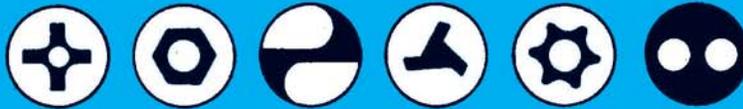
A decrease of more than 30 hardness points HV (Vickers) between Position 1 and Position 2 indicates excessive decarburization and that the part does not conform to the specification.

The message of this article is that no certification relative to the ASTM standards listed above is complete unless they contain a reference to the findings of the required decarburization testing. 

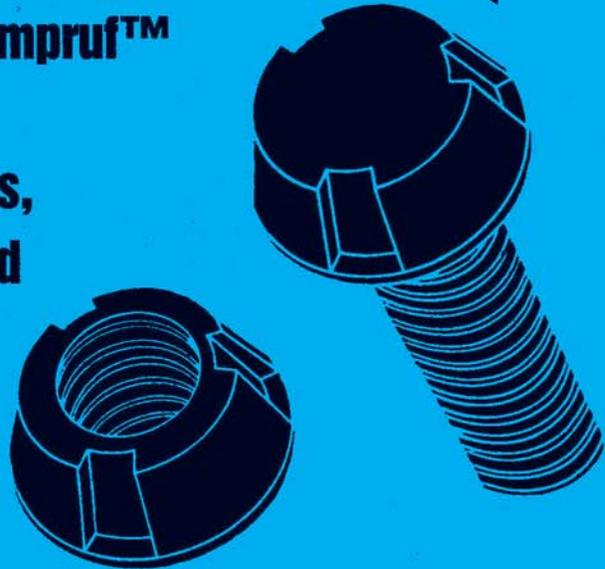




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DID YOU SAY FREE? COMPUTER INSIGHTS DID! *continued from page 78*

# The BUSINESS EDGE 2.0

## FREE iPad 3s

The BUSINESS EDGE 2.0 will be demonstrated at the show. Computer Insights will be taking tentative orders (letters of intent) on the show floor.

Any company that approves a letter of intent to purchase BUSINESS EDGE 2.0 between now and the end of the show will receive a FREE iPad 3. In order to receive the iPad 3, the company must finalize the order before December 31, 2013. There is no limit to the number of companies that can receive the iPad 3.



## The BUSINESS EDGE 2.0

The BUSINESS EDGE 2.0 is now used all over North America by fastener and industrial suppliers. Computer Insights unique, cost effective, online methods of implementing this system are extremely effective. They have hundreds of clients and all of their focus is on the fastener and industrial supply industry. Since they only work in this very narrow market, the system that they have developed is focused on the needs of their clients. While custom programming is available, it is rarely needed.

## The Brighton-Best Connection

In 2010 Computer Insights, Inc. and Brighton-Best International (BBI) released the Brighton-Best Connection and now it is in use all over North America. This exclusive system allows users of The BUSINESS EDGE 2.0 to view price and availability from Brighton-Best while they are inside The BUSINESS EDGE 2.0. They can also place orders with Brighton-Best from inside The BUSINESS EDGE 2.0. The distributors get their web discount from Brighton-Best and eliminate the need for double entry. Now BBI's customers can even get MTR's for the products that they receive from BBI with a click of a button in The BUSINESS EDGE 2.0.



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In addition to the normal ERP (Enterprise Resource Planning) capabilities that The BUSINESS EDGE 2.0 offers, there is an optional Quality System Module that integrates all of the major functionality required by an ISO or AS 9100 quality system. Integrating these capabilities eliminates the possibility of errors and it saves The BUSINESS EDGE 2.0 fastener clients a huge amount of time and money.

## Great Opportunity

Denny said, "This is an outstanding opportunity to learn more about our industry leading system and perhaps even own it FREE."



## More Information

To find out more about The BUSINESS EDGE 2.0 or to arrange a demonstration, Computer Insights, Inc. can be reached at 108 Third Street, Bloomingdale, IL 60108. Their telephone number is 1-800-539-1233, email sales@ci-inc.com and their website is www.ci-inc.com. 



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 416  
 430  
 440C  
 501 HEAT TREATED  
 17-4 PH  
 904L  
 ALLOY 20  
 A286  
 254-SMO  
 CARPENTER 20 Cb3  
 FERRALIUM 255  
 NITRONIC 50  
 NITRONIC 60

### STAINLESS STEELS

ASTM A193 B5  
 ASTM A193 B6  
 ASTM A193 B8 CLASS 1  
 ASTM A193 B8 CLASS 2  
 ASTM A193 B8M CLASS 1  
 ASTM A193 B8M CLASS 2  
 ASTM A193 B8C  
 ASTM A193 B8R  
 ASTM A193 B8S  
 ASTM A193 B8T  
 ASTM A320 B8 CLASS 1  
 ASTM A320 B8 CLASS 2  
 ASTM A320 B8M CLASS 1  
 ASTM A320 B8M CLASS 2  
 ASTM A453 660B  
 ASTM A453 660D

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 MONEL R-405  
 MONEL K-500  
 INCONEL 600  
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 INCONEL 718  
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 INCONEL 925  
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 HASTELLOY C-276

### DUPLEX

2205  
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2507  
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### ALUMINUM ALLOYS

2024T4  
 6061T6

### ALLOY STEELS

4140  
 4340  
 ASTM A193 B7  
 ASTM A193 B7M  
 ASTM A193 B16  
 ASTM A320 L7  
 ASTM A320 L7M  
 ASTM A320 L43  
 ASTM A354 BC  
 ASTM A354 BD  
 SAE J429 Grade 8

### CARBON STEELS

1018  
 1020  
 1045  
 1117  
 12L14  
 1215  
 A36

### TITANIUM

ASTM B348  
 ASTM B381

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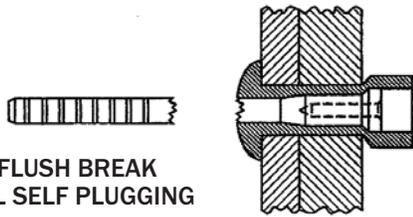


**THE LARGE RANGE OF STRENGTH VALUES IN BLIND RIVETS** *continued from page 94*

The length of the rivet body does not affect the shear and tensile values. Example: a 1/8 diameter blind rivet with a steel rivet body will have a shear value of 260 lbs. and a tensile value of 310 lbs. no matter if the rivet body has a maximum grip range of 1/8 inch or 1/2 inch, the shear and tensile value are the same. This is the same for all five diameters of blind rivets.

The Break Mandrel Blind Rivet (IFI-114 Specification), the rivet body alone gives the shear and tensile. The rivet body is the only component in the shear plane of the work pieces.

There are also Structural Blind Rivets (IFI-134 Specification)



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Structural blind rivets leave the mandrel in the shear plane giving higher shear values. The mandrel of a structural blind rivet is made to break just below the flange of the rivet body leaving mandrel material in the shear plane. Now, we have the rivet body and the mandrel

in the shear plane when the structural blind rivet is set.

Structural blind rivets are produced in two diameters, 3/16 and 1/4 inch. The chart below shows minimum and maximum shear and tensile values.

Diameter	Metal	Shear lbs.	Tensile lbs
3/16	Aluminum	550	450
3/16	Steel	1300	1000
3/16	Stainless	1300	1000
1/4	Aluminum	1270	830
1/4	Steel	2400	1850
1/4	Stainless	2400	1850

The large range of the structural blind rivets shear and tensile values make it possible to have the correct shear and tensile value to make a positive and secure riveted joint. Along with the range of shear and tensile values of the set blind rivet, you also have a good clamping load that compresses the work piece being riveted into a tight assembly.

The various types of metal alloys used to produce blind rivets also give you the opportunity to use the correct alloy for your blind rivet application and environment that the riveted joint will be subjected to.

You are able to select the setting force you need for your application and also satisfy the environment that the riveted joint will be in. 

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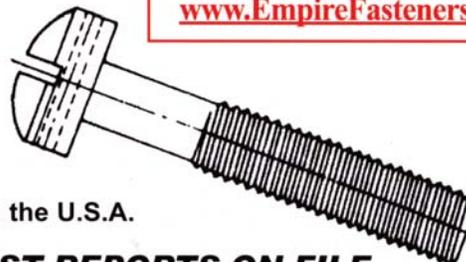
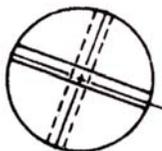
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- Stainless: UNS-S30430
- Passivation: Per QQ-P-35

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 the Tensile requirements of  
 procurement spec. FF-S-92B

### Tightening Zones of the Torque-Angle Curve

When studying the torque-angle signature there are four distinctive zones that need to be identified. The four zones are:

- Rundown/Prevailing
- Alignment
- Elastic Clamping
- Post Yield

Each zone has its own characteristics regarding the effects on the joint as well as the look of the curve.

#### Rundown/Prevailing Zone

The Rundown/Prevailing zone occurs at the beginning of the tightening process (assuming the assembly is loose prior to tightening). In this zone the clamp load is zero and the only resistance is due to friction in the threaded region. This zone is prior to the bolt/nut touching the bearing surface.

The Rundown/Prevailing zone features any of the thread forming or thread locking processes that occur during the rundown. For non-prevailing nuts or assemblies with clean and tapped threads this zone will appear as a line overlapping the angle axis at a zero torque level.

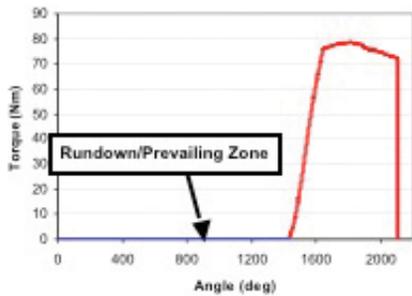


Figure 4: Rundown with No Prevailing Torque

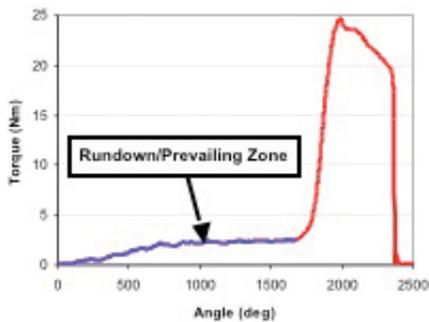


Figure 5: Rundown with Locking Feature

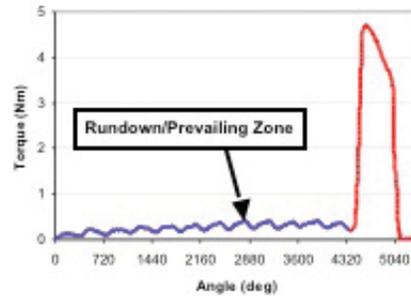


Figure 6: Rundown with Thread Forming

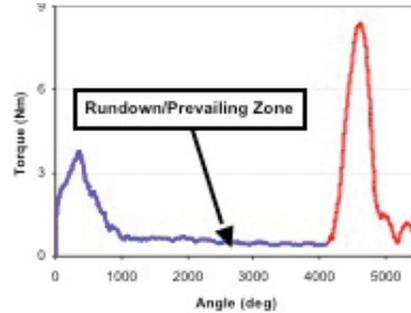


Figure 7: Rundown with Break Through Torque

#### Alignment Zone

The Alignment zone occurs at the end of the Rundown/Prevailing zone. In this zone the clamp load begins to increase but not at the same rate as the bolt tension. This causes the zone to appear nonlinear on the curve and makes this zone undesirable for any reference points such as a threshold for angle or especially a final installation torque.

This zone is very dependent on the stiffness of the joint. Typically hard joints will have a smaller alignment zone than softer joints.

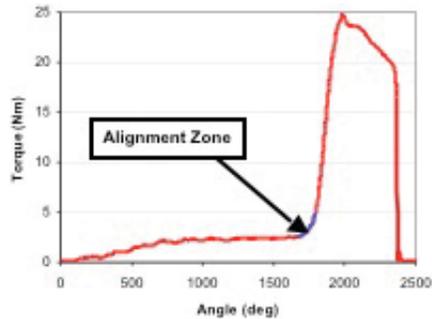


Figure 8: Small Alignment Zone

*please turn to page 248*



## DISTRIBUTOR NEWS



**Dunham Products, Inc.**, a leading manufacturer of high strength fasteners and secondary processing, recently purchased two additional centerless grinders that will allow both bar grinding and infeed of larger and longer part configurations. In order to increase their drilling and tapping capacities they also purchased 7 multi-headed Kingsburys. These most recent purchases followed the addition of four thread rollers and two Hwacheon CNCs in 2012. This increased both capacity and capabilities, and created a need for additional qualified staff.

Broad strengths allow for both complete manufacturing and secondary processes which include grinding, thread rolling, re-rolling of damaged or non-gaging threads, drilling, and tapping. Dunham currently manufactures a variety of MS, AS, & NAS standards for Aerospace, Military, and Nuclear applications. In order to exceed customer demands and the highest level of quality ISO 9001:2008 and QSLM class 2 and 3 thread certifications are maintained. Additional certification will soon be extended with the completion of an AS Certification.

Since its inception in 1946, Dunham Products' success has resolved from working to give the customer more than they expect by going the extra distance. Dunham Products, Inc. is a third generation company in the heart of the Midwest just outside of Cleveland, Ohio.

For more information, contact Dunham Products at 7400 Northfield Road, Walton Hills, OH 44146. Give them a call at 440-232-0885, Email: [sales@dunhamproducts.com](mailto:sales@dunhamproducts.com) or visit them online at [www.dunhamproducts.com](http://www.dunhamproducts.com).



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UNDERSTANDING TORQUE-ANGLE SIGNATURES OF BOLTED JOINTS *continued from page 246*

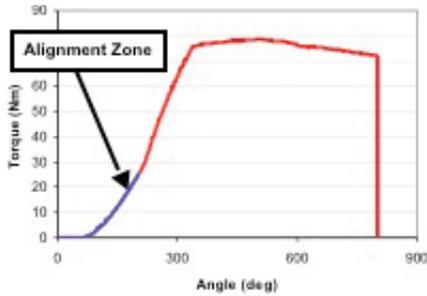


Figure 9: Large Alignment Zone

The Alignment zone represents the portion of the curve where the mating parts and the fastener come together and start to deform. This zone is a complex mixture of both macro and micro effect including:

**Macro Effects**

- Drawing Together of Mating Threads
- Bending Together of Mating Parts
- Fastener Bending as a Result of Non-Parallelism of the Bearing Surfaces

**Micro Effects**

- Contact Stress Deflections of Plating
- Surface Roughness
- Thread Deformations

The further the fastener is tightened through the Alignment zone the closer the assembly gets to deforming as a single entity with the fastener.

**Elastic Clamping Zone**

The Elastic Clamping zone occurs at the end of the Alignment zone. In this zone the clamp load increases at the same rate as the bolt tension. This causes the zone to appear linear on the curve. In this zone the most consistent relationship can be found between torque, clamp load, and angular displacement.

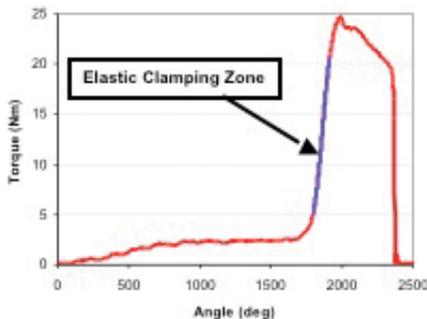


Figure 10: Elastic Clamping Zone

**NOTE:** Due to the linearity of this zone it is the only zone on the torque-angle curve where the basic tightening (K-Factor) and friction calculations are valid.

Any angle reference points should be made in this region, and angle measurements will be most consistent in this zone.

Most torque specifications are made in this region in order to prevent any permanent deformation of either the clamping parts or the fastener.

The slope of the Elastic Clamping zone is a function of the stiffness of the assembly (combination of fastener and clamped parts) and the friction in the thread and bearing areas. A change in either of these will affect the slope of this zone.

Harder joints will typically have a steeper slope than softer joints, and joints with higher friction will have steeper slopes than those with lower friction.

Stiffness changes will have a larger effect on the slope than the frictional changes.

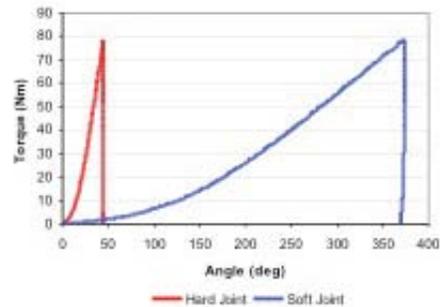


Figure 11: Hard and Soft Joint Curves

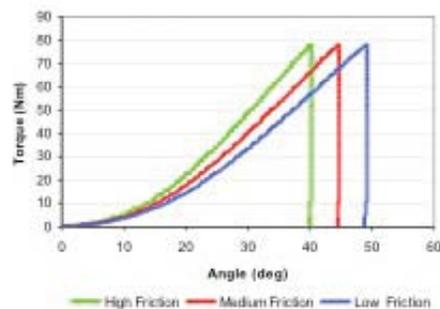
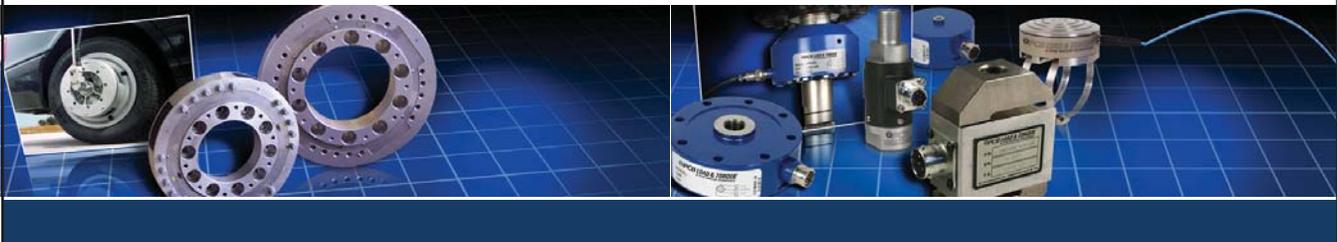


Figure 12: Frictional Effects

**NOTE:** Frictional changes will alter the slope only when joint stiffness remains constant.

*please turn to page 254*





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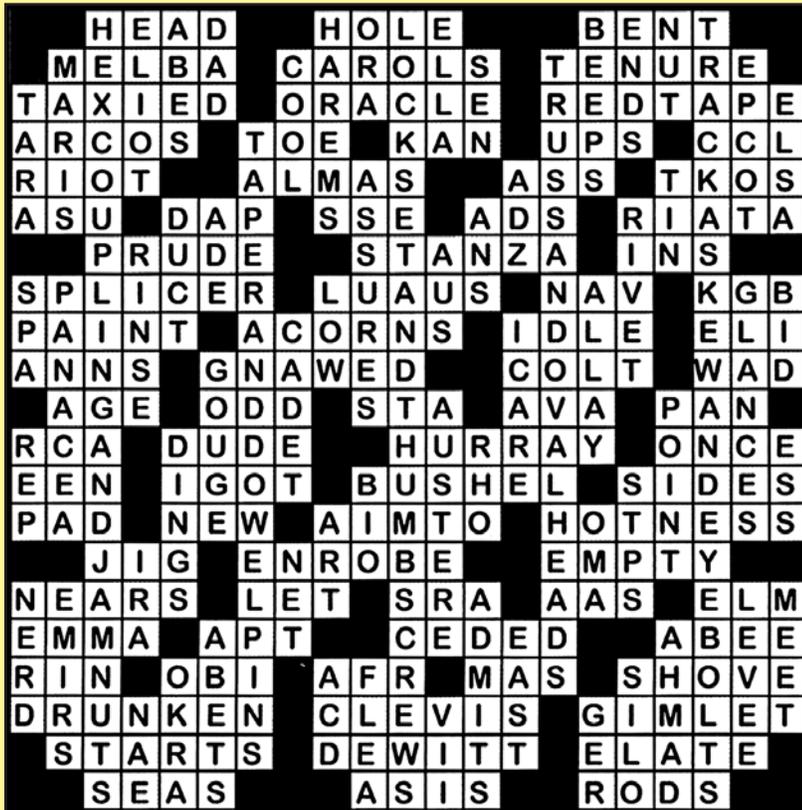
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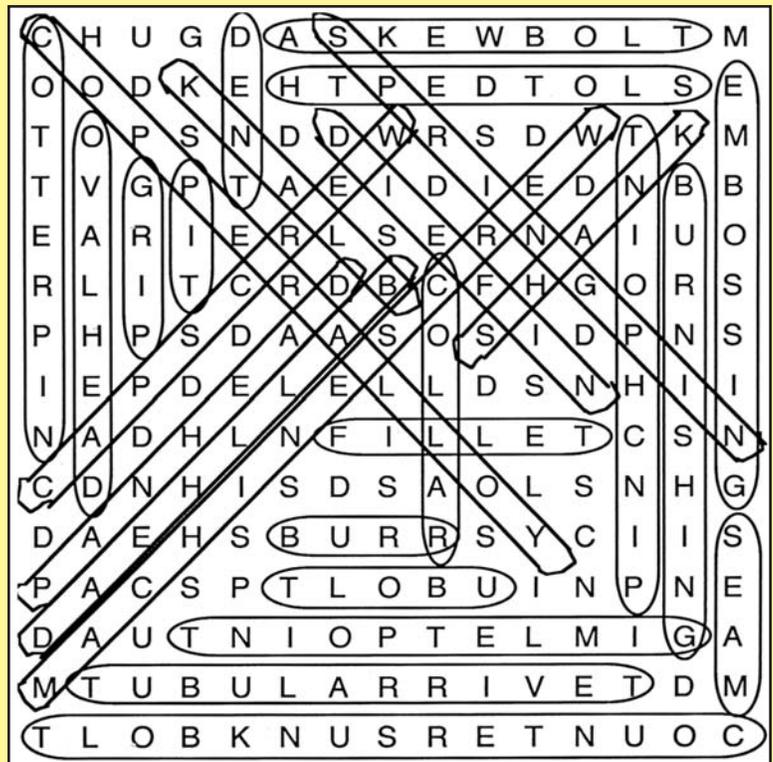


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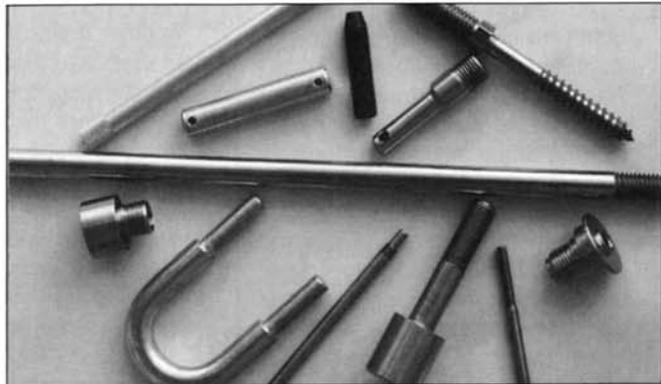
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UNDERSTANDING TORQUE-ANGLE SIGNATURES OF BOLTED JOINTS *continued from page 248*

The following figure shows how change in both the stiffness and underhead friction coefficient can alter the slope of the linear portion of the curve.

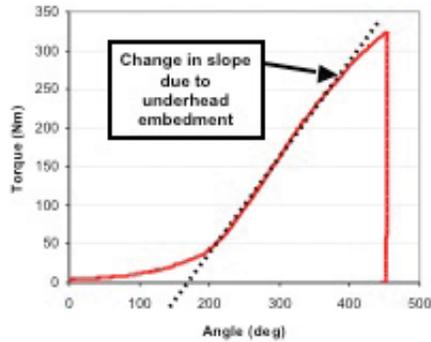


Figure 13: Underhead Embedment

Underhead embedment is a slight crushing of the bearing surface in the clamped parts. This is not a yielding of the bolt, and thus it is important to understand the service loading of the joint. Often embedment is a desired effect in order to help prevent slipping due to transverse loading.

### Post Yield Zone

The Post Yield zone occurs at the end of the Elastic Clamping zone. In this zone permanent deformation has occurred in either the fastener or clamped parts causing a change of slope of the torque-angle curve. Depending on the elasticity of the joint this zone will vary in size prior to ultimate failure (bolt breaking, thread strip, or parts crushing).

This zone begins when the slope of the curve decreases from the Elastic Clamping zone. If tightened far enough into this zone a peak torque will be reached and additional loading will cause the joint to fail.

It is possible to determine the failure mode of the bolted joint by studying the Post Yield zone of the torque-angle curve.

The failure mode of the fastener breaking is evident by the curve demonstrating a vertical drop after the peak torque value followed by a flat line along the zero torque axis.

On a thread strip failure the decrease in torque will not typically be a vertical drop after the peak torque. A steep downward slope can occur along with the torque value not going to zero. Often times a cyclical wavelike form will be present as in Figure 15.

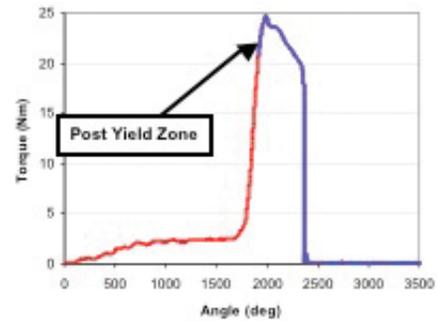


Figure 14: Bolt Breaking Failure

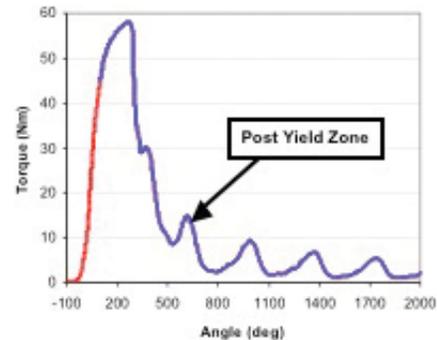


Figure 15: Thread Strip Failure

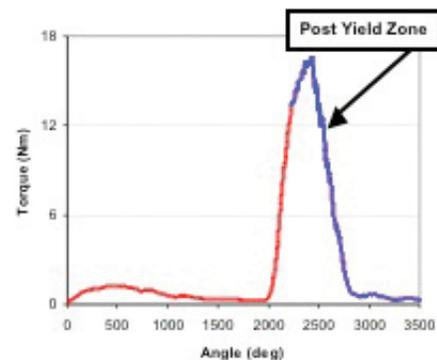


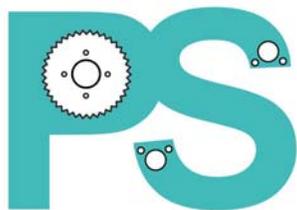
Figure 16: Thread Strip Failure

Figure 17 shows the curve increasing in slope after the initial yielding. This represents that the clamped parts crushed but eventually stabilized to have another elastic clamping range with a new joint stiffness (different slopes in the two elastic zones). Eventually the bolt yields and breaks.

**NOTE:** Depending on the joint, even entering this region will consider the joint failed.

*please turn to page 256*





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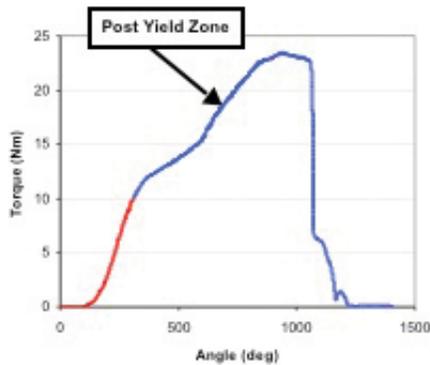
UNDERSTANDING TORQUE-ANGLE SIGNATURES OF BOLTED JOINTS *continued from page 254*

Figure 17: Clamp Parts Crushed w/ Bolt Breaking Failure

### Analysis of the Torque-Angle Curve

Within the four tightening zones there are four critical points that need to be identified. These points include:

- Max Drive/Prevailing Torque
- Seating Torque
- Yield Torque
- Ultimate Torque

These torque points are used to determine if the installation torque is at a desired location on the curve. These points are typically found by torque to failure testing on actual assemblies.

### Max Drive/Prevailing Torque

The Max Drive/Prevailing torque value represents the maximum torque value located within the Rundown/Prevailing zone of the torque-angle curve.

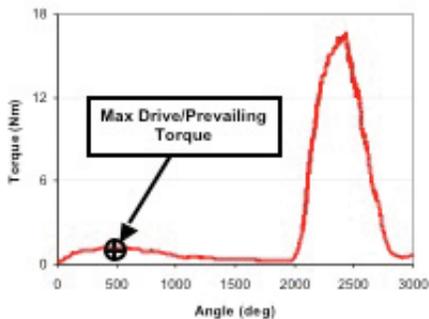


Figure 18: Max Drive/Prevailing Torque

This torque value represents the maximum torque effects of any thread forming or thread locking process. The occurrence of the max drive torque can happen anywhere within the Rundown/Alignment zone depending

on the joint being analyzed.

This torque value is necessary in establishing an acceptable installation torque window.

**NOTE:** An installation torque that is lower than the Max Drive/Prevailing torque value would result in zero clamp load in the bolted joint.

### Seating Torque

The Seating torque value represents the beginning of the Elastic Clamping zone. It is the torque at which the fastener is fully seated and where the fastener and clamped parts are deforming as one.

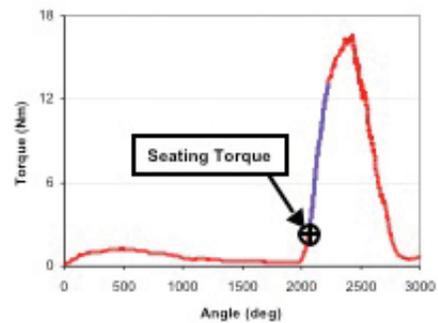


Figure 19: Seating Torque

If a line is drawn tangent to the linear portion of the curve, the Seating torque will be located at the point where the tangent and the curve first bisect.

**NOTE:** An installation torque that is lower than the Seating torque value would result in a low clamp load and inconsistent load from part to part.

### Yield Torque

The Yield torque value represents the end of the Elastic Clamping zone. It is the torque at which the fastened assembly will stop returning to its original shape if loosened.

This point represents the end of the consistent relationship between torque, clamp load and angle. The Yield torque represents the beginning of either the bolt yielding, parts permanently crushing, or the threads beginning to strip.

*please turn to page 258*





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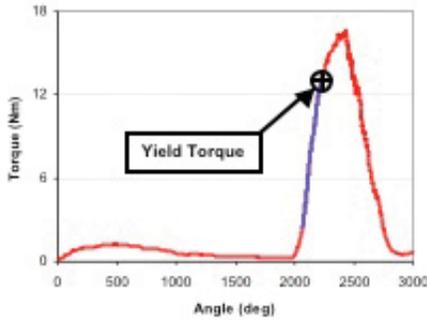


Figure 20: Yield Torque

If a line is drawn tangent to the linear portion of the curve, the Yield torque will be located at the point where the slope of the curve becomes less than the tangent.

**NOTE:** An installation torque that is greater than the Yield torque value may result in the assembly failing when the joint is put into service.

**NOTE:** Some bolted joints are intentionally tightened past the Yield torque in order to insure a minimum clamping load is attained.

**Ultimate Torque**

The Ultimate torque value represents the maximum torque that the joint can handle prior to the bolt breaking, clamp parts crushing completely or cracking, or the threads stripping.

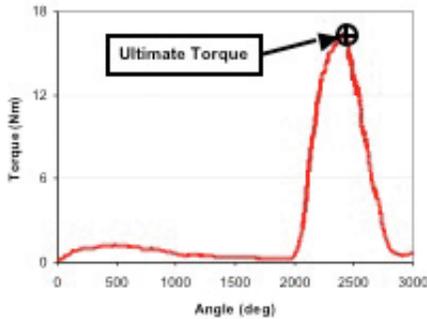


Figure 21: Ultimate Torque

The Ultimate torque value is located at the maximum torque value on the curve.

**NOTE:** An installation torque that is greater than the Ultimate torque value will result in the assembly failing during installation.

**Determining Tightening Specifications**

The previously mentioned torque points are measured in order to determine a installation torque value that will insure that the joint is fully seated and not in a yielded state. Failure testing will be performed on actual assemblies (typically of lots of 6 to 30 samples) in order to obtain a distribution of each of the four points. The  $\pm 3$  sigma values for each point will be calculated and compared to determine an acceptable torque window for the bolted assembly.

**The following will describe the procedure:**

1. Determine the  $\pm 3$  sigma values of each of the four points.

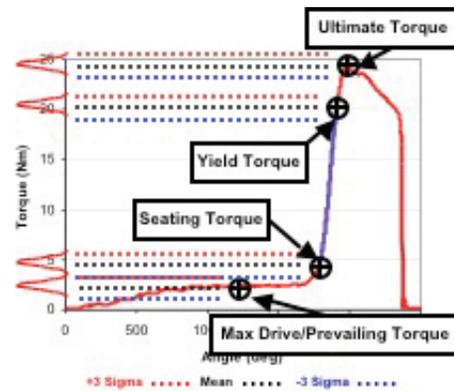


Figure 22: Measured Torque Values

2. Establish a torque window between the  $-3$  sigma yield torque value and  $+3$  sigma max drive or seating torque. The larger of the two values should be picked.

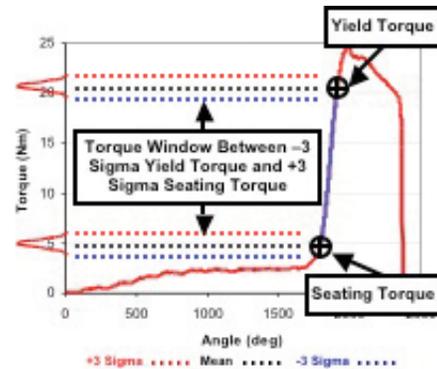
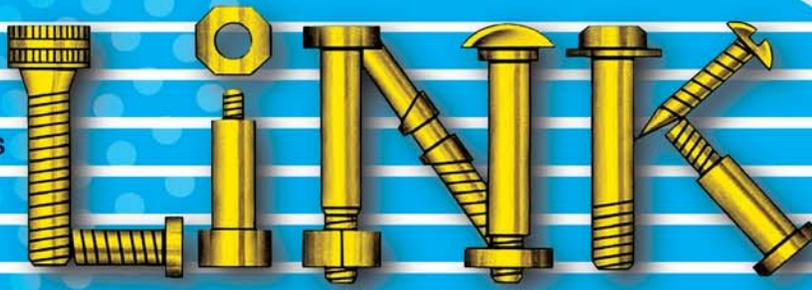


Figure 23: Torque Window Using Seating Torque

*please turn to page 263*



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**COMPONENTS FOR INDUSTRY IS ALL ABOUT PARTNERSHIP** *continued from page 138*

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*CFI founders,  
Annie Squire-  
Patrick and Kevin  
Christie with their  
Chief of Security,  
"Snort"*



## Nothing But Praise

Kevin interjected by praising the process and the Computer Insights team. "You can't believe the service we received. From start to finish, Computer Insights was there for us every step of the way. Even after implementation, the support we receive daily, even to this day, is what we have come to expect from our own staff. There are many computer programs out there, but without the right support, how good are they?"

## Conversion Was Fast And Easy

CFI implemented The BUSINESS EDGE 2.0 at the end of 2012 and has never looked back. Annie explained, "The system is unbelievably user friendly. The user reports are fantastic and where there were things we wanted to modify to work better with our internal systems, Computer Insights reacted instantly. Our switch over was the smoothest change we have had in over 20 years in business and our company is running with greater efficiency and effectiveness than ever. This is enabling us to experience unprecedented growth and serviceability with our ever growing customer base. We made the right move with The BUSINESS EDGE and highly recommend it. It was another business learning experience yet this one was a pleasurable one. Our thanks to Computer Insights for making our company more efficient!"

## The BUSINESS EDGE

How do they remain unique and competitive? As Kevin Christie states, "It's a matter of keeping up with innovation and efficiencies." He goes on to explain, "That's where The BUSINESS EDGE comes into our planning process. With growth and success, come new challenges". Annie added, "As CFI grew, and we needed to upgrade our systems to something thorough and user friendly. We found this in The BUSINESS EDGE system. It was a big move for us." She went on to say, "Our biggest concern was not only the training and implementation time, but the changes and differences a new system would bring. How much disruption to our growing business were we to expect? How best do we manage that? "

## More Information

For more information about Components for Industry, contact Ms. Annie Patrick or Kevin Christie, Owners. 1351 Armour Blvd, Mundelein, IL 60060, Tel: 847-918-0333, Fax: 847-918-0371, Email: [apatrick@componentsforindustry.com](mailto:apatrick@componentsforindustry.com) or online at [www.componentsforindustry.com](http://www.componentsforindustry.com).

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Benjamin Franklin said, "If we take care of the minutes, the years will take care of themselves."

Everything that we achieve in life happens in the context of time. The reality is that if you are not purposeful about how you spend your time, then you leave your results to chance. While it's true that we control our actions and not our outcomes, our results are created by our actions. It

stands to reason that the actions that we choose to take throughout our day, ultimately determine our destiny.

To realize your potential, you must learn to be more mindful about how you spend your time. Living with clear

intention goes against the powerful natural tendency to be reactive because it requires you to organize your life around your priorities and consciously choose those activities that align with your goals and vision. When you use your time intentionally, you waste less of it and spend more of

it on your high-value actions. Intentionality is your secret weapon in your war on mediocrity.

The key to successful time use is not necessarily in eliminating unplanned interruptions but in regularly blocking out time for the important activities. Just

gaining control over a few hours each week often has a dramatic effect. Learn to use your time with greater intention and you will not only be more effective, but you will also feel a greater sense of control, less stress, and increased confidence. Try Time Blocking, it works! 

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#### UNDERSTANDING TORQUE-ANGLE SIGNATURES OF BOLTED JOINTS *continued from page 258*

The following figure shows a torque window being made using the max drive/prevaling torque value as the minimum torque limit.

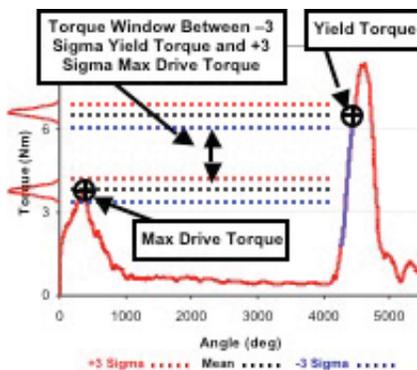


Figure 24: Torque Window Using Max Drive Torque

Once a torque window is established, select a torque value at the upper end of the range. The +3 sigma value

should not be used because tools tend to overshoot the programmed or set torque shut-off due to momentum, signal response time, and/or tool capability. Typically 80-90% of the +3 sigma torque value will be set as the torque specification depending on tool capability.

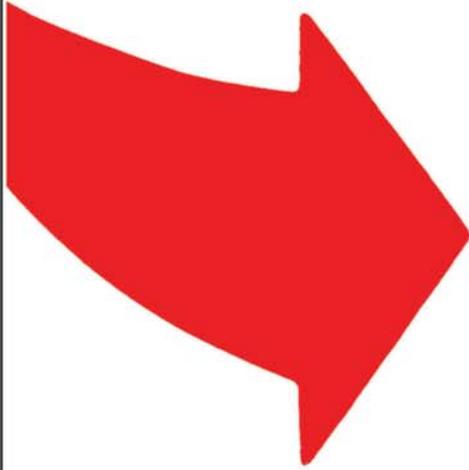
**NOTE:** The method described above assumes that the proper bolt size is being used to keep the assembly together. Bolted joints should be designed with a minimum required clamp load in mind to prevent joint failure.

#### Conclusion

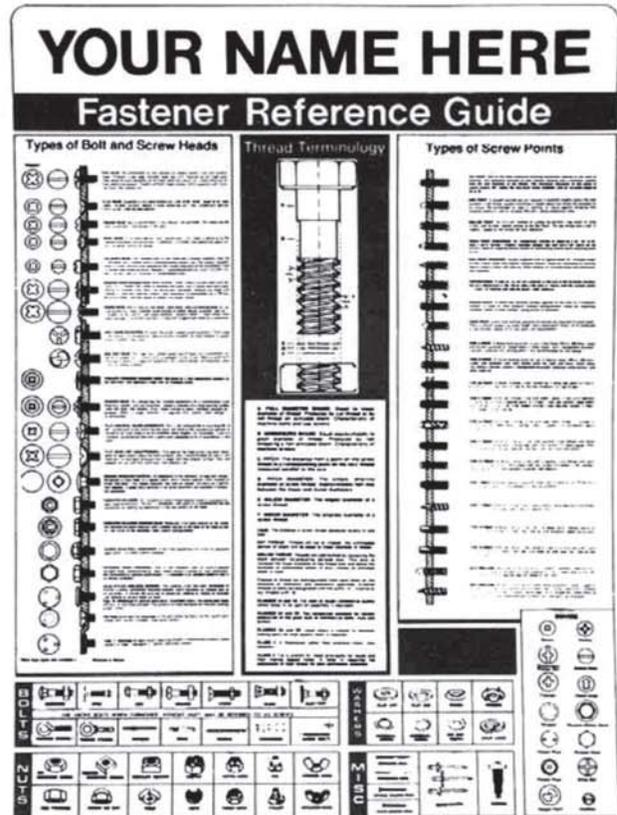
Quite a lot can be learned about the installation of a bolted joint by observing its torque-angle signature. An understanding of the type of joint, failure mode, or if the bolted assembly is in a yielded state can be determined. Torque-angle signature analysis proves to be an inexpensive yet very effective method to understand bolted joint issues and should always be considered for a preliminary study. ⚙️



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## DISTRIBUTOR NEWS

### Laboratory Testing

**Inc. (LTI)**, a full service materials testing, non-destructive testing and metrology lab, recently introduced fatigue crack growth testing as one of their many mechanical testing services. LTI's lab performs fatigue crack growth testing, also called  $da/dN$  testing, according to the ASTM E647 standard. Constant load, increasing, decreasing and constant delta K, and constant  $K_{max}$  control methods are offered. The test can be performed at temperatures between 250°F and 400°F and at loads running from 50 lbs. to 55,000 lbs.

The fatigue crack growth test generates a curve displaying the crack growth rate as the cyclic stress intensity factor (delta K) is varied. The test results also provide the data points and a  $da/dN-dK$  plot. Additionally, LTI also has the capability of providing customers with threshold and Paris Law values. Laboratory Testing works with customers to provide adaptable testing for specific testing and engineering needs.

The fatigue crack growth test reports the resistance of materials to stable crack extension under cyclic loading. Compact Tension (C(T)) and Middle Tension (M(T)) specimen configurations are supported in a variety of sizes. The M(T) specimen is primarily used for sheet materials, and the C(T) is



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used for a range of different material forms including sheet, plate, bar and forgings. Starter notches are formed using wire EDM.

Fatigue crack growth rates from the threshold regime to the critical region are typically developed using constant load or K-controlled parameters. The automated fatigue crack growth testing system at LTI uses MTS closed loop servo-hydraulic load frames controlled by FTA ADWin based system. Crack length is monitored using the

compliance (FCGR-C) method.

Laboratory Testing Inc. provides fatigue crack growth testing through its Mechanical Testing Department, which also performs fracture toughness, hardness, impact, stress rupture and tensile testing. These other services are accredited by A2LA to ISO/IEC 17025 and by PRI/Nadcap, ensuring accurate and reliable results.

For more info call 1-800-219-9095, email: [sales@labtesting.com](mailto:sales@labtesting.com) or visit [www.labtesting.com](http://www.labtesting.com).

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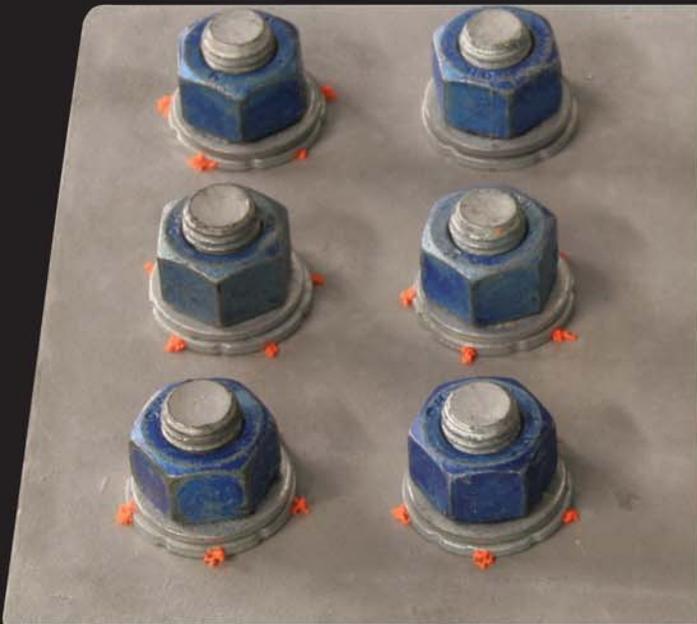
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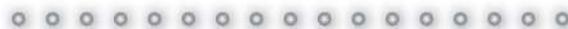
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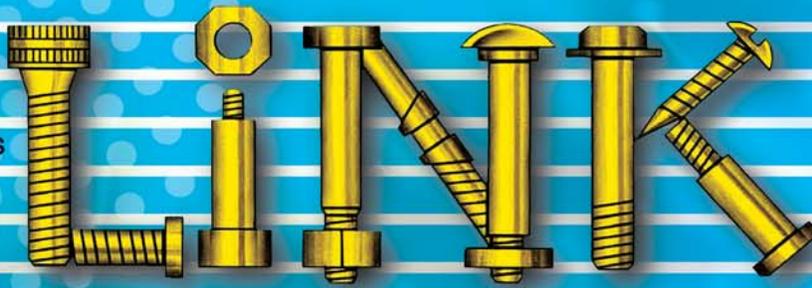
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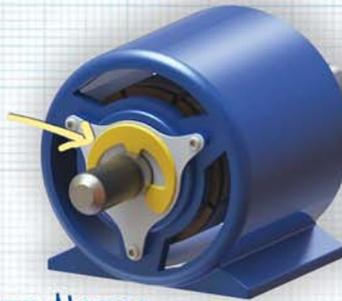
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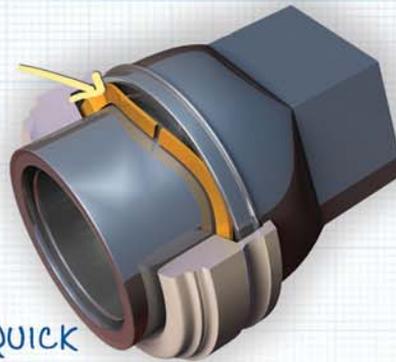
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