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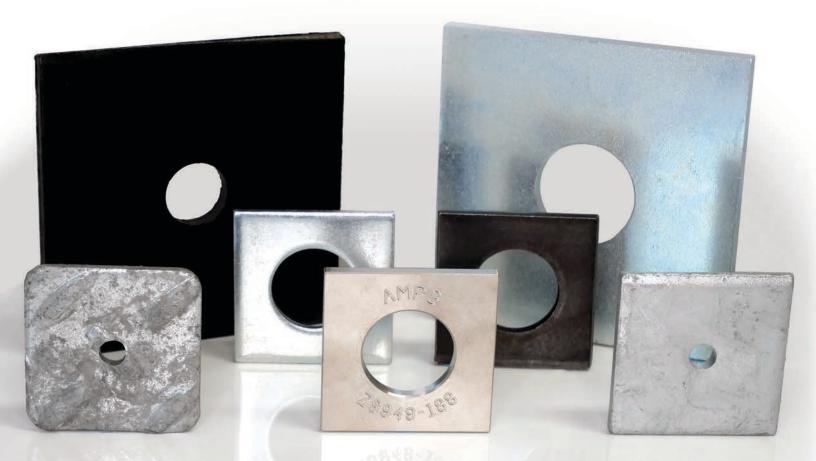
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THE FUTURE IS COMING



in the Fall 2021 issue of

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DISTRIBUTOR'S LINK MAGAZINE IS A QUARTERLY PUBLICATION DEDICATED TO REPORTING, EDUCATING, AND PROMOTING THE FASTENER INDUSTRY SINCE 1976.



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DESIGN AND PRODUCTION OF LINK MAGAZINE PROVIDED BY



6 O THE DISTRIBUTOR'S LINK

<u>distributor</u>news

Pivot Point Incorporated, a manufacturer of Non-Threaded Fastener solutions, has broken ground on a new 30,000 square foot expansion

to the manufacturing space at their Factory #2 in Hustisford, Wisconsin. Combined with the adjacent Factory #1, their total facilities will increase to nearly 100,000 square feet.

Bayland Buildings, Inc.

of Green Bay, WI was selected as the design/build general contractor and has worked with Pivot Point for several months on design, engineering and layout. Bayland will erect a steel frame and beam building that allows for a greater clear-span of the interior space, thus optimizing work and traffic flow for manufacturing.

Says owner Sol Leitzke: "We've invested heavily in equipment, especially automation, so that we can have the best value proposition in quality, pricing and lead times. This has resulted in steady growth, and we're practically bursting at the seams. This factory expansion will

> allow us to continue to add equipment and continue to grow without constraint."

> Pivot Point's products include Clevis Pins, Cotter Pins, Quick Release Pins and Devices, Locking Pins and Wire-Rope Lanyards; as well as several unique and

highly popular proprietary items, including the SLIC $Pin^{TM_{-}}$ a pin and cotter all in one.

Pivot Point held a groundbreaking ceremony on September 9th to commemorate the expansion of the company's facilities. The expansion is expected to be completed in summer of 2022.

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

Smalley Steel Ring Company is pleased to announce that it received the 2020 General Motors Supplier Quality Excellence Award for the 9th consecutive year.

Out of the thousands of GM suppliers, only a

small percentage receive this prestigious honor. The Supplier Quality Excellence Award is presented to suppliers who have met or exceeded a stringent set of criteria ranging from production to delivery.

"Despite the challenges of getting through unprecedented

times in 2020, we are both honored and proud to receive the GM Supplier Quality Excellence Award. We will continue to strive for excellence and earn the trust of our partners, suppliers, and global customers each day." said Daniel Greenhill, Customer Quality Manager.

Smalley is a quality-driven organization that

provides the highest quality retaining rings and springs. Smalley's parts have been used in the Automotive industry for over 100 years in everything from steering systems to transmissions. Smalley's latest automotive innovation, the Revolox[™] Self-

Locking Ring, enables engineers to design for high RPM requirements cost-effectively and with ease of assembly for high volume applications.

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Rob LaPointe aim testing laboratory

Rob LaPointe is a noted authority in materials and fastener technology. With extensive experience in the management and science of materials testing laboratories combined with master's degrees in physics and education, he excels at bringing solutions to the client. Working specifically in the fastener testing industry, he has developed expertise in mechanical, nondestructive, metallurgical and chemical testing. With a background of 20 years in physics education, Rob is effective at communicating complex ideas in a simple and understandable manner, communicating well with clients enabling them to make informed decisions about their products and business. AIM is located at 1920 Cordell Court #101, El <u>Cajon, CA, 92020. Tel: 909-254-1278, email: sales@aimtestlab.com or online at www.aimtestlab.com</u>

MAGNETIC PARTICLE TESTING VS. PENETRANT TESTING – WHICH TEST IS BEST?

Many drawings, manufacturing specifications, and procurement specifications require nondestructive testing (NDT) to verify that fastener products are free from discontinuities such as cracks, laps, bursts, folds or voids. These conditions may render the product unsuitable for its intended use in high-risk applications such as aircraft or military machinery which have very strict requirements. Certain types of discontinuities such as voids and others that are severe in nature may cause the fastener to not function as intended by weakening the product.

The two nondestructive tests that are most often required to detect discontinuities in fasteners are Magnetic Particle Testing (MT) and Penetrant Testing (PT). Both test methods will detect most of the flaws that might occur in a fastener product. Both have unique strengths



FIGURE 1 - A HEX CAP SCREW WITH QUENCH CRACKS OPEN TO THE SURFACE. THE CRACKS ARE SHOWN IN FLUORESCENT GREEN UTILIZING MAGNETIC PARTICLE TESTING

and limitations that are implicit to each due to the physical properties of the processes.

Many specifications require one or the other test method to be used depending on the type of metal the product is made from; however, some specifications allow the choice of which test to use. This brings up the question: Which

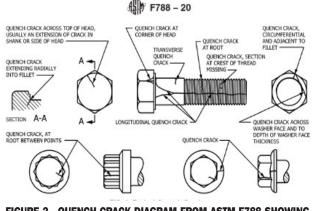


FIGURE 2 - QUENCH CRACK DIAGRAM FROM ASTM F788 SHOWING TYPICAL LOCATIONS OF QUENCH CRACKS

test is best?

Before we get into addressing which test is best, let's take a moment to understand a few things. First, we must understand the types of discontinuities that either test can detect and those they are not capable of detecting. Both tests can detect any discontinuity that is open to the surface. In other words, any discontinuity that connects to the surface and is not fully contained within the body of the fastener and is below the surface. This type of discontinuity is called a Surface Discontinuity because it intersects with the surface. See Figure 1 for an example of a surface discontinuity. Other types of surface discontinuities that can be detected by MT or PT are quench cracks (caused by thermal stress in heat treatment), bursts (caused by moving material too fast in heading), voids (a casting flaw) that are open to the surface, seams (a casting flaw), folds (caused by improper heading) and laps (caused by misaligned thread rolling).

TECHNICAL ARTICLE

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Bruno Marbacher

Bruno Marbacher earned his mechanical engineering degree in Switzerland, he also holds a business degree. He started out as a tool and die maker (poly-mechanic) and over the years he has held various management positions in quality and engineering. During his time in America he has developed and given numerous seminars on topics related to the proper use of mechanical fasteners and machine elements, and assists engineers in solving fastening/assembly issues. His has groomed and directed many young engineers in fastening/assembly technology. He now offers his 40 years of experience through writing and lecturing.

DRIVING SYSTEMS FOR FASTENERS – THE VERTICAL WALLED SYSTEMS

Dear Reader - in this article we cover vertical walled drives, all kinds of socket drives. We listed the critical functional features again; the details were described in the first article (summer 2012 issue) we will cover the most commonly used vertical wall drives.

Critical Drive Features

To choose a screw with certain drive there are several things to be consider. The Critical Functional Features are:

- ¤ Amount torque it can absorb.
- ¤ Off-angle driver to drive.
- ¤ Ease off alignment/engagement
- ¤ Cam-out, tendency to push driver out.
- ¤ Durability of drive, repeated assembly
- ¤ Good Stick fit, hold driver in drive.
- ¤ The effect of the coatings on driver engagement
- ¤ Tamperproof, preventing unauthorized access.
- ¤ Its worldwide availability

Hex/Allen



Hex socket drive is the first internal wrenching hexagon. It was developed by Standard Pressed Steel Company (SPS) in Philadelphia USA in 1911. SPS gave it the tradename "Unbrako".

The German company Bauer & Schaurte patented the hex socket in 1936 in Germany, and marketed the products as "inbus", commonly but incorrectly called "imbus". Inbus is derived from Innensechskant (Inner 6-edge) In the USA the term "Allen key" is often used.

The hex socket screw drive has a hexagonal recess and may be driven by a hex wrench, also known as an Allen wrench, Allen key, hex key, or inbus as well as by a hex screwdriver.

Feature & Concerns:

¤ Originally designed for machine tools so screws could be recessed (for machine tools, heads should not protrude to prevent injuries)

¤ Thick coating as well as zinc flake coatings may not fill the socket at all or fill up, may over-bridge smaller sockets, this is a concern for other socket products for sizes M5 (#10) and up for socket set screws M8 (5/16) and up. Some coating applicators have special centrifuges (special processes) that alleviate these issues.

¤ The socket drive does not perform well in shallow head designs (button heads, low heads etc.). sockets may be reamed out (corner being rounded) making the drive unusable

¤ Except for the shallow sockets they offer a great a stick fit characteristic. On shallow socket a pilot hole on the bottom of the drive can improve stick fit.

¤ This drive has a poor off-angle capability. Special keys

can improve that. This is essentially true for all socket products. Very commonly used worldwide for high torque applications

These drives are more likely to be found on set screws and machine screws than on wood screws.



TECHNICAL ARTICLE



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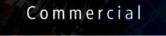
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Chris Donnell

Chris Donnell is the National Sales Director for Scanwell Logistics International (CHI) Inc., specialtzing in Supply Chain Management, Inventory Control, Logistics Sales and Management. Chris excels at selling the "Solution" to advanced program analysis and implementation. A highly ambitious and effective team leader who thrives on the challenges of this industry, Chris currently oversees a National Sales and Partnership Program consisting of more than 100 Sales executives who focus primarily on SCM and Logistics development in most vertical markets. Contact Chris at 847-228-6789 or email: chrisdonnell@scanwell.com.

ISSUES FACING THE TRANSPORTATION WORLD

One of the hottest topics in today's industry is transportation and supply chain management. Specifically, what is happening and what can we still expect to happen. For some it's hard to imagine that issues pertaining to domestic or international shipping could get worse. Let me

assure you, it can, and it will.

Today, many believe that Covid-19 was the driving force that sank global transportation. In reality, Covid-19 simply exposed the weaknesses of the global supply chain. This may be debatable so I will just point to issues currently taking hold in the transportation



PORT CONGESTION AT THE PORT OF YANGSHAN - SHANGHAI. CHINA

industry as well as the impact felt along every aspect of the global supply chain.

[1] China shutters the third largest port in Ningbo, China. This is the second closing in the span of three months. Previously, the government of China shut down the port of Yantian, the second largest container port in the world, for about a month in June. This closure left manufacturers, shippers and importers scrambling to find available capacity in outlying ports. The backlog is still being felt in Yantian where there are more than 1 million containers/bookings pending while the carriers which are anchored off of Yantian are still mounting. The closure of Ningbo for the past 2 weeks will send this port into chaos as cargo is being diverted to Shanghai and other ports. Carriers are still bypassing the port of Ningbo.

[2] Seafarers, the crews that are operating the ocean going vessels, are seeing their normal at-sea time tripled and many are unable to disembark from the vessel at the ports of call due to travel restrictions related to Covid-19. The average time a seafarer spends on a vessel perpandemic is roughly 60 to 90 days. However, due to labor shortages, congestion, and the restrictions, we're seeing this time frame swell to 180 to 250 days depending on the routing. Just recently, the seafarers union for Hyundai

announced they would strike if their demands for a sizable salary increase and bonus structure was not instituted. The deadline for this agreement was August 26th so this is a major concern. The impact will be a ripple effect throughout the industry. If you recall, in 2016, when the carrier Hanjin

was forced into solvency, it stranded containers worldwide. With Hyundai, the result of this strike could be the same. Taking a large global carrier and its capacity out of circulation would be catastrophic.

[3] Port congestion is ramping up, as of August 26th there were approximately 35 containers anchored off of the coast of Los Angeles and Long beach; 10 in Oakland: 6 in Tacoma and Seattle: and the news doesn't get any better in Canada or the East Coast. Dwell times (time it takes for a ship to arrive at port until it's emptied) in Seattle and Tacoma are roughly 11-15 days where normally that timeline is 3-4 days. The ripple effect from this congestion is felt long and wide: terminals are buried in freight and can't off-site store; terminals shutting down for days when trucks and equipment can't be returned, causing detention and storage costs to the imports, and that's if your containers aren't put into a stack and deemed unacceptable by the terminal (if that happens the container or shipment can be stuck there indefinitely).



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STAFDA'S IN-PERSON CONVENTION AND TRADE SHOW IN ORLANDO by Georgia H. Foley, CEO

Despite all the turbulence in the world, the entire fastener industry is moving forward by holding their in-person conventions this fall and that includes the Specialty Tools & Fasteners Distributors Association (STAFDA). STAFDA will meet in Orlando, FL, October 24-26 at the Orange County Convention Center (OCCC).

Orlando has a proven track record of hosting safe and healthy meetings. Since reopening, the city has hosted 100+ meetings at the Global Biorisk Advisory Council (GBAC) accredited OCCC. Orlando's airport and STAFDA's host hotels also have the GBAC stamp of approval awarded to facilities that follow a high standard of cleaning, disinfection, and disease prevention.

Orange County employees, which include the OCCC, will be required to be fully vaccinated and wear masks indoors. More than 65% of County residents are fully vaccinated and with mobile vaccination sites, that percentage continues to climb.

For months, STAFDA has been working closely with Orlando Health to provide attendees with a safe and positive experience. Near STAFDA's registration area, Event Medical Services LLC will be onsite to offer medical care. The Association will follow whatever CDC guidelines are in effect for late October.

Thankfully, Orlando has a busy fall and upcoming shows include the National Safety Council Congress & Expo, October 11-13 with anticipated attendance of 13,000; ICE-USA/InPrint USA, October 19-21, with 3,000 attendees, and right after STAFDA is InfoComm with 44,000 attendees, October 27-29. No events are being canceled.

Things are progressing well for STAFDA and another workshop speaker was recently added to the Orlando roster. Mark Sangster, a cybersecurity evangelist, will lead a session on The New Cyber Threat Landscape to



address an increasing problem for STAFDA members: ransomware. Cybersecurity was the #1 discussion topic during STAFDA's Mid-Year Board of Directors meeting and is a serious issue for businesses of all sizes and across multiple industries. Manufacturers are particularly targeted because they can't afford down time and are more likely to pay the ransom. Sangster will show how ransomware impacts partners up and down the supply chain. He's authored No Safe Harbor: The Inside Truth about Cybercrime – and How to Protect Your Business. His program is scheduled for Tuesday, October 26, 8:00 – 9:30 a.m.

Sangster joins the distinguished line-up of business speakers including Janine Driver (Decoding Body Language to Increase Sales); Kelly McDonald (How

to Work & Lead People Not like You); Jamie Turner (The Unspoken Rules of Leadership); Skip Weisman (Overcoming the Seven Deadliest Sins); Paul Reilly (Sales PRO); and economist, Alan Beaulieu.



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We began manufacturing miniature screws and fasteners for demanding operating conditions and other specific needs in 1960 in a two-car garage with a staff of three. Sixty-one years later, Crescent Manufacturing is three generations strong operating in a 25,000 sq. ft. facility in Burlington CT. Crescent currently manufactures over 100 different AN, MS, and NAS part numbers. **We are AS9100D with ISO 9001:2015 Certified**. (See our products on page 132.)

Crescent Manufacturing produces high quality, cold headed engineering products specializing in parts 00 through ³/8" in diameter up to 3" long. We fill orders from 1000 pieces to millions of parts and distribute our products across 5 continents including North America, South America, Europe, Asia, and Australia.

Reputation Built on Precision, Careful Monitoring, and Performance

At Crescent Manufacturing, we are your trusted partner in helping you to take care of your customers' business with commercial orders as well as blueprint orders. Our masterful production process for heading, threading and slotting screws result in better-made screws in less production time with improved on-time deliveries.

Our Global Mission

To secure the world's innovation in safety, performance, strength, stability, and sustainability by manufacturing and delivering precision screw products through distribution partners.

We Are a leading manufacturing supplier of a variety of screws and fasteners made for distributors.

We Commit to investing our time, talent, knowledge, skills, and resources, with care, making the best products available on the market.

We Aspire to revolutionize the use of precision performance screws by how we think about, manufacture, deliver, and use Crescent Manufacturing products, thus becoming the supplier of choice in the fasteners industry.

Our Core Values are delivered in our promise of Customer Care, Transparency, Performance, Integrity, and Trust.

The Demographics we work with are 85% in the U.S.A. and 15% around the world.

Largest Industries We Serve are Aerospace & Military, Electronics, Healthcare, and Recreational Equipment. We are also expanding into Robotics and emerging markets.





CRESCENT MANUFACTURING



"We have worked through some tremendous challenges. As a result, Crescent Manufacturing is a more equipped, prepared, and responsive company."

Dan Bielefield, Vice President, Sales

Dear Colleagues,

Over the past 18 months the COVID pandemic has presented all of us with an incredible challenge to maintain operations while learning to do business in a whole new way. The employees and management at Crescent Manufacturing have used this time as an opportunity to improve our performance, processes, and priorities to meet the urgent demands of our partners during this global crisis. One area where we have concentrated our efforts and become unstoppable is in meeting your specific fulfillment needs and responding accordingly:

First, we always acknowledge what you need and how we can get it done with quality and ease.

- Streamlined Process: With a new review process on incoming orders, we have streamlined the time it takes to get orders from the sales department into production.
- Order Tracking: We added a new "production control" person who is responsible for tracking all orders to ensure they stay on time and on schedule throughout the manufacturing process.
- **Turnaround Times:** We established a more realistic system for estimating on-time deliveries, so we meet your expectations with the delivery times that we quote to you.
- **Recruitment:** We recruited top talent to our expediting and inside sales departments that ensure you receive a timely answer to all your inquiries.
- **Customer Service:** We added new equipment to our manufacturing lines to produce more quality parts in less time. We expanded our warehouse to offer our customers the option of holding their orders for future deliveries.

Our goal is to make it easy to do business with Crescent Manufacturing. We thank you for your patience as we have worked through these significant challenges. Your continued support is appreciated as we continue to improve to meet the needs of our valued customers.

Dan Bielefield

dan@crescentmanufacturing.com 860-614-1817

Dan Bielefield is a long-time, well-respected fastener industry executive. He returned to Crescent Manufacturing in May of 2021 to lead its sales team, recruit top talent, and drive continuous improvement in its partnerships.



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CRESCENT MANUFACTURING

Continued on page 22.

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THE TIME IS RIGHT TO JOIN IFI TO HELP ADVANCE THE FASTENER INDUSTRY

Pandemic Reinforces Role of Trade Associations as Collective Voice of Industries

The past 18 months have fundamentally changed manufacturing. Entire industries were forced to adapt to changes being made to address needs arising out of the pandemic, and there was no playbook for individual companies to follow.

Trade associations gained significant recognition as the knowledge centers for entire industries. During the worst of the pandemic, decisions made in Washington, DC to stabilize the economy had a direct impact on day-today business operations. Business owners/management needed to understand the rapidly changing new rules, and Congress needed to understand how business was being impacted. Trade associations took their place as the voice of key industries, and this is especially true for the Industrial Fasteners Institute (IFI) throughout the pandemic.

In addition to making sure IFI members had the government resources needed to continue operations during 2020 and 2021, IFI began holding virtual meetings with key Members of Congress to voice our industry's support for a comprehensive infrastructure package and tax policies that allow manufacturers of all kinds to remain competitive. While in-person congressional meetings are still on hold, IFI will continue to brief key legislators in a virtual manner.

Beyond serving as the collective voice of the fastener industry, the IFI continues to advance the responsiveness of the industry by updating industry standards and



resources, while providing virtual educational webinars to keep members ahead of the curve for the changing marketplace.

By joining IFI, companies gain the collective strength and knowledge needed to compete in a rapidly changing industry. Associations, like the IFI, become the eyes, ears and voice for an industry, reaching further, collectively, than is often feasible for a single company.

IFI provides valuable information like market insight, professional development, industry standards and technology to boost performance and efficiency. IFI is structured to mirror the marketplace for fasteners, promoting a close relationship between manufacturers and their markets, providing a forum for resolving common issues and concerns for fasteners in a given application.

Members of IFI receive technical support in product design, manufacturing practices, quality assurance and standards development and interpretation. IFI staff provides technological leadership, serving as the first face of the fastener industry, interfacing with key organizations, including the American Society of Mechanical Engineers (ASME), the American Society for Testing and Materials (ASTM), SAE International, the Research Council on Structural Connections (RCSC), and the International Organization of Standards (ISO).

TECHNICAL ARTICLE



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Guy Avellon

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

WHAT FASTENER DISTRIBUTORS NEED TO KNOW ABOUT ASSEMBLY TOOLS

Besides selling fasteners of all types, many distributors also sell power tools for bolted joint assembly. Even if power tools are not sold by your organization, having the wrong tool by the assembler can cause many fasteners to fail.

Many assembly plants use more sophisticated power tools than those used in maintenance. Most of these are digital that indicate the sequence and pattern to tighten the bolts. For example, if #2 bolt is missed in a programmed sequence, the tool will not allow the #3 fastener to be tightened until the #2 fastener is tight.

Automotive assembly lines use these types of tools as well as gang runners where several sockets are attached to multiple bolts, such as head bolts on an engine or wheel nuts, then slowly torque all down at the same time.

Nut runners and powered screw drivers are power assisted tools driven either by pneumatic or electrical energy. The nut runners produce low torque that can be very accurate. These are used to tighten nuts, flanged head screws and small socket head fasteners below 1/2" or 12 mm.

DC Electric Tools

Many earlier nut runners were corded but the DC powered battery tools are more portable and ergonomically easy to use in tight areas.

The more sophisticated DC electric tools are programmable, stores multiple torque values, has a data base used for error-proofing and some will have linear translators for x-y positioning.

The more common and less expensive DC power tools are powered by 20 volt rechargeable Lithium

batteries. Mostly used by contractors and maintenance, the majority are not adjustable for output speed. If the user is not careful, the heads of small screws can easily become twisted off, such as deck screws and wood screws. If the user is tightening deck screws, etc. with a 1/2" 20v drill body, there could be many failures.

Checking different well known manufacturers, one 1/2" 20v has an RPM range of 400-1200-1900 and delivers initial impacts of 700-1200 lb-ft of torque. Another will deliver 600 lb-ft off torque but only 330 lb-ft initial torque from 0-900-2,000 RPM.

Other models will provide their torque output in inchpounds, such as 1825 lb-in (152 lb-ft.) or 1400 lb-in (116 lb-ft). There are even 1/4" 12v models which produce 1300 lb-in (108 lb-ft) that are very adequate to do the job quickly and efficiently.

Pneumatic Power Tools

Pneumatic power tools are commonly known as impact wrenches. These are air driven power tools which produce repeated output blows on an output anvil. Commonly used in automotive repair shops, truck shops for glider kit (frame) building and tire mounting shops. Some larger models are used to tighten large bolts up to $1 \ 1/2^{"}$ (38 mm).

The advantages of pneumatic power tools is their high torque and high speed. A 1/2" medium duty air driver will produce 600 lb-ft of torque at 7,300 RPM with 1,000 beats per minute (BPM). This is enough torque to destroy any Grade 8 bolt up to 7/8". The 1/2" Heavy Duty model will produce 650 lb-ft of torque at 7,500 RPM with 1,100 BPM. There are some older models which produce 450 lb-ft of torque.

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REGISTRATION IS NOW OPEN FOR FASTENER FAIR USA 2021



HUNTINGTON CONVENTION CENTER CLEVELAND, OHIO NOVEMBER 8–10, 2021

Registration is now open for the 2021 Fastener Fair USA taking place at the Huntington Convention Center in Cleveland, Ohio. This year's event will include a dynamic, day-long educational program on November 8, and a productive, two-day expo geared to the entire fastener industry on November 9 and 10.

Fastener Fair USA 2021 will produce a pre-show conference program on November 8, as well as technical sessions on the floor on products and processes impacting the industry. Key among these is a heightened interest among OEMs and distributors in sourcing fasteners and fixtures closer to point of use. The pandemic has complicated the global supply chain, and more firms are expected to examine the potential to source more of their fastener production and processing, like adhesive application and coating, closer to home, or in some cases, in house.

Fastener professionals from every segment of the market will find the latest products they need at Fastener Fair USA and the manufacturing sectors it serves. Specializing in Industrial Fasteners and Fixings, Construction Fixings, Assembly and Installation Systems, Fastener Manufacturing Technology, Storage, Distribution, Factory Equipment, Services, and Information and Communications, Fastener Fair USA is your platform to meet with new and current customers and network with industry leaders.



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HOT DIPPED GALVANIZED STRUCTURAL BOLTS AND NUTS REQUIRE SPECIAL THREAD GAGE SIZES

Many structure bolts and nuts are ordered with heavy coatings on them to increase their resistance to corrosion. The applicable American Society for Testing and Materials (ASTM) standards provide special thread allowances to accommodate the heavy coatings. These heavy coatings can be a major source of assembly problems if the special thread size allowances are not understood and used by bolt and nut suppliers.

ASTM publishes the requirements for inch and metric structural bolts and nuts used in the United States. The structural bolt standards are ASTM A307, A325, A325M, A490, and A490M. The structural nut specifications are ASTM A563 and A563M. The specification numbers ending in "M" cover metric bolts and nuts and those without the "M" cover inch bolts and nuts.

Within these standards, the thread class specified for the uncoated inch bolts is 2A, and for Metric bolts, it is 6g. The thread classes specified for nuts to be used with the uncoated bolts are 2B for inch nuts and 6H for Metric nuts. and A490M do not allow any coating to be applied to these bolts as a precaution against Hydrogen Embrittlement.

Galvanizing and mechanical zinc coating deposits alter the sizes of the thread characteristics such as Pitch Diameter, major diameter, and minor diameter by several thousanths of an inch. To prevent possible thread interference between the bolt and nut at time of assembly, the ASTM standards provide a clearance allowance for both in order to accommodate the size changes resulting from the thicker coating.

These coating allowances are provided in a table of each standard, but only ASTM A563 provides the exact thread size limits when the allowances are added. In all other standards the supplier or user must calculate these special thread sizes if they with to order thread gages to inspect their coated bolts and nuts. To make thread gage ordering easier and more consistent for those wanting to inspect coated structural bolts and nuts, the following two charts are provided.

Thread sizes are of all coarse thread series.

When ASTM A307, A325, and A325M bolts are ordered coated the most commonly specified coatings are hot dipped galvanized per ASTM A153 or mechanical zinc per ASTM B695. When bolts are ordered coated, it is a good practice to order the ATM A563 or ASTM A563M nuts that go with those bolts with the same type of finish. ASTM standards A490

	Thread si	zes for galavaniz	zed ASTM A32	5M bolts and A563	3M nuts	
Thread	Bolt			ASTM		
	Max. Pitch Daim. Go	Maximum Major Diam.	Min. Pitch Diam., Go	Max. Pitch Diam., NoGo	Minimum Minor Diam.	Allowance
M5 X .8	4.612	5.132	4.636	4.761	4.290	0.156
M6 X 1.0	5.524	6.174	5.550	5.700	5.117	0.200
M8 X 1.25	7.415	8.226	7.443	7.603	6.902	0.255
M10 X 1.5	9.304	10.279	9.336	9.516	8.686	0.310
M12 X 1.75	11.194	12.331	11.228	11.428	10.471	0.365
M14 X 2.0	13.083	14.383	13.121	13.333	12.255	0.420
M16 X 2.0	15.083	16.383	15.121	15.333	14.255	0.420
M20 X 2.5	18.864	20.487	18.906	19.130	17.824	0.530
M22 X 2.5	20.864	22.487	20.906	21.130	19.824	0.530
M24 X 3.0	22.643	24.592	22.691	22.956	21.392	0.640
M27 X 3.0	25.643	27.592	25.691	25.956	24.392	0.640
M30 X 3.5	28.424	30.697	28.477	28.757	26.961	0.750
M36 X 4.0	34.202	36.801	34.262	34.562	32.530	0.860
M42 X 4.5	39.984	42.905	40.047	40.362	38.099	0.970
M48 X 5.0	45.761	49.010	45.832	46.167	43.667	1.080
M56 X 5.5	53.543	57.115	53.618	53.973	51.236	1.190
M64 X 6.0	61.323	65.219	61.403	61.778	58.805	1.300



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DELIVERING THE GOODS by Dennis Cowhey

Are you spending your time trying to make sure you are delivering your products cost-effectively? If you are, you are not alone.

The COVID-19 pandemic has caused a massive increase in eCommerce orders. This spike has put a strain on both domestic and international carriers' capacity. That, coupled with the increasing challenge to find warehouse workers and truck drivers, is driving up shipping costs. It is a lot to stay on top of the constantly changing shipping costs and options. If you are not paying attention, your margins can shrink, or you could end up selling products at a loss. Spending time researching your best shipping method on a daily basis can degrade your customer support as well as your efforts to engage new customers.

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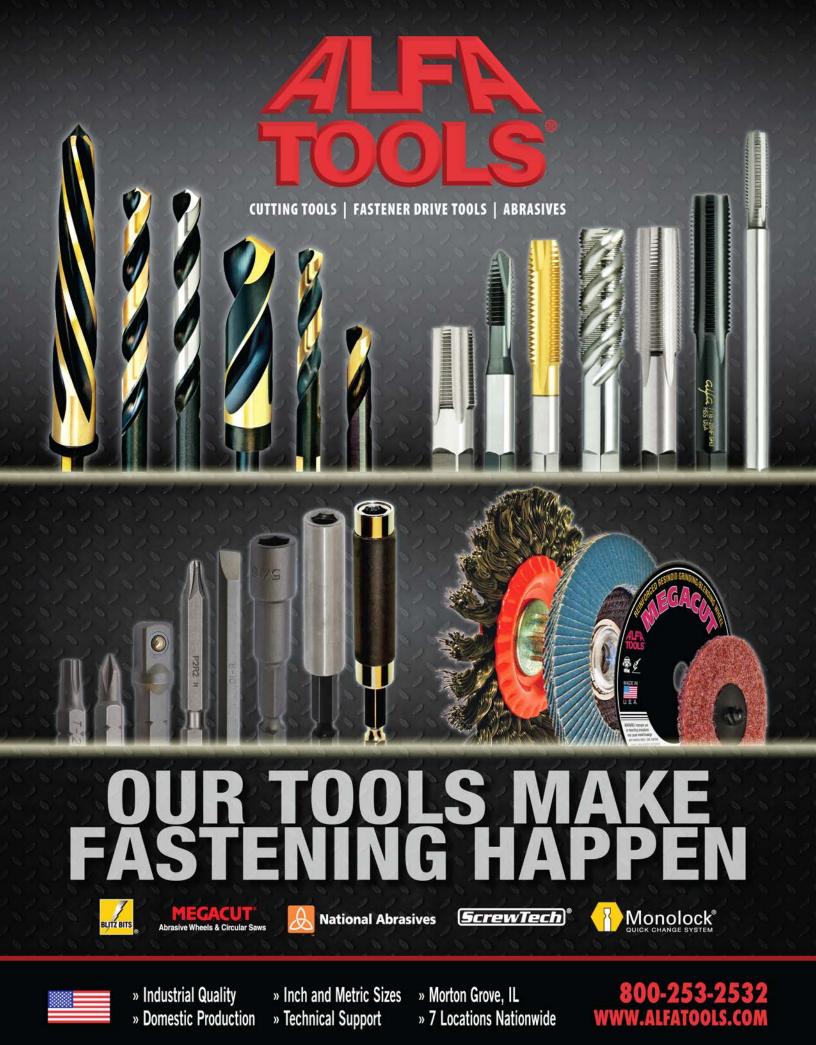
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		EAE Orders	Continuedangery						
SHIPMENT BATES									
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Shipment Date	09-08-21								
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Ship Via	Package	Package Description		Ship Cost	Insurance	Confirm	Other		Days Guarante
USPS Priority Mail Express	Flat Rate Envelope		caraboard envelope provided by \$1	22.75	0.00	0.00	0.00	22.75	2 No
USPS Priority Mail Express	Fiat Rate Legal Envelope	Flat Rate Legal Envelope		22.95	0.00	0.00	0.00	22.95	2. No
USPS Priority Mail Express	Flat Rate Padded Envelope			23.25	0.00	0.00	0.00	23.25	2 No
USPS Priority Mail Express	Package		lance around the thickest part is les	220.15	0.00	0.00	0.00	220.15	2 No
JSPS Priority Mail	Flat Rate Envelope		cardboard envelope provided by th	7,40	0.00	0.00	0.00	7,40	3 No
USPS Priority Mail	Flat Rate Legal Envelope	Flat Rate Legal Envelope		7.70	0.00	0.00	0.00	7,70	3 No
JSPS Priority Mail	Flat Rate Padded Envelope				0.00	0.00	0.00	8.00	3 No
USPS Priority Mail	Large Flat Flate Box	Large Flat Rate Box (12 x 12 x 5 1/		19.30	0.00	0.00	0.00	19.30	3 No
USPS Priority Mail USPS Priority Mail	Medium Flat Plate Box		8 1/2" x 5 1/2" or 14" x 3.5" x 12" U	13.75	0.00	0.00	0.00	13.75	3 No 3 No
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UPS Intel Day Air Saver - COU UPS 2nd Day Air AM				310.60	0.00	0.00	0.00	310.69	2 705
UPS 2nd Day Air				268.64	0.00	0.00	0.00	268.64	2 105
UPS 3 Day Select				150.64	0.00	0.00	0.00	150.84	2 Yes
UPS Ground - COD				45.08	0.00	0.00	0.00	45.08	4 Yes

BUSINESS FOCUS ARTICLE





Joe Dysart

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

DOUBLING-DOWN ON RANSOMWARE PROTECTION: KEY SOFTWARE FOR FASTENER DISTRIBUTORS

As the threat of ransomware has reached new heights in 2021, many fastener distributors across the globe are doubling-down on their defense against the scourge

 making sure they've done everything they can to avoid becoming its next victim.

Indeed, successful ransomware attacks on key infrastructure and supply lines in the United States have proven so visceral this year, they've triggered an executive order from U.S. President Joe Biden – nudging all U.S. businesses to get serious about ransomware protection.

Says Biden: The order "calls for federal agencies to work more closely with the private sector to share information, strengthen cybersecurity practices, and deploy technologies that increase reliance against cyberattacks.

"It outlines innovative



LONG A SCOURGE, THE THREAT IF RANSOMWARE IS LOOMING EVEN LARGER



THE U.S. DEPARTMENT OF JUSTICE WAS ABLE TO CLAW BACK \$2.3 IN BITCOIN FROM A HACKER WHO DISRUPTED COLONIAL PIPELINE

program; the ransomware disruption of service on the Colonial Pipeline, the largest conduit of refined oil products in the U.S. and the ransomware seizure of computer files of the Washington DC Metropolitan Police Department.

businesses across the U.S. have been reeling from

successful ransomware attacks, including attacks against

SolarWinds, a commonly used IT management software

Still other ransomware takedowns include a takeover of computer files at goliath meatpacking concern JBS Foods as well as at the National Basketball Association.

Granted, authorities have occasionally gotten lucky against ransomware hackers during 2021. Excellent cyber forensic work by the U.S. Department of Justice, for example, clawed back \$2.3 in Bitcoin that the Colonial Pipeline paid to ransomware hackers to

ways the government will drive to deliver security and software – using federal buying power to jumpstart the market and improve the products that all Americans use."

During 2021 alone, fastener distributors and other

help get its computer network up-and-running again.

Says Lisa O. Monaco, U.S. Deputy Attorney General: "Following the money remains one of the most basic, yet powerful tools we have.

CONTRIBUTOR ARTICLE

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Laurence Claus

Laurence Claus is the President of NNi Training and Consulting, Inc. He has 25 years of experience with a medium sized automotive fastener manufacturer, holding positions including Vice President of Engineering, General Manager, Director of Quality, Director of New Business Development and Applications Engineer. In 2012 he formed NNi offering technical and business training courses as well as technical consulting, expert witness and consultation work. He can be reached at 847-867-7363 or by email: Lclaus@NNiTraining.com. You can learn more about NNi at www.NNiTraining.com.

"ANYONE? ANYONE?" – HAS YOUR TEAM DECIDED TO TAKE THE DAY OFF FROM TRAINING?

At one point in the 1986 John Hughes classic Ferris Bueller's Day Off, we are transported into the Economics class that Ferris has cut, where actor and comedian Ben Stein is droning on in a tedious and mind-numbing monotone. As Stein proceeds through his lesson on the Hawley-Smoot Tariff Act, he continually seeks engagement from his students by intoning the now cult classic lines "Anyone? Anyone?" Unfortunately for him, he is playing to a comatose audience, artfully captured as the camera pans around the classroom exposing student after student either in bored stupor or sleeping. We all laugh at such a scene, not only for its hilarity, but because deep down we can all commiserate with these trapped students. Surely at some time in our lives, we have had a similar experience. Of course, if these students are the team of individuals you want to get trained, such an episode is no laughing matter.

Training, like just about any other activity under your roof, requires a deliberateness and level of excellence that we cannot simply leave to casual chance. When it comes to training, I consistently observe two things in many organizations. First, training is not really ingrained in the culture. Oh, the organization engages in training, but more because they feel it allows them to "check off a box" to impress a customer or a Quality Management System auditor rather than really bring value to their team or organization. Secondly, most organizations focus on quantity versus quality. Please don't get me wrong, surely there are many subjects ripe for training in the ordinary fastener distributor and I am not trying to suggest that we necessarily do less training. However, I have yet to have a client ask me about how they can improve the effectiveness of the training they are doing,

because they are not programmed to think about training in this way.

From my perspective this is a critical question that all fastener distributors should be wrestling with. Once you have identified what training and development is necessary for every member of your team, then it becomes important to determine how the training they will receive is going to be most effective. This article will explore the different methods for training at your disposal and several tips on how you might go about improving them and making them more effective.

Why Train?

If I posed this question to you, "why should you train your team", it is very likely that you would respond with something like "duh, isn't that obvious?" You might explain to me that your Quality Management System has requirements in it for training, that conducting training looks good to a customer or other individual, or that we are wired to learn so it's just the "right thing to do". If I pushed, however, and asked you to really dig deep and think about all the value training brings, several very compelling ideas might surface.

[1] Improved Productivity - Study after study show that training makes team members more productive and accelerates the productivity of those new to an organization or role. Although it depends on the job function, recent studies indicate that it normally takes between eight months to several years for new team members to reach full productivity. Training can dramatically shorten that cycle and bring new team members up-to-speed faster providing your organization improved productivity and efficiency.

TECHNICAL ARTICLE



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by **JOHN WOLZ** EDITOR editor@globalfastenernews.com

GLOBAL

AUTOMOTIVE FASTENER MARKET AT 4.5% CAGR

The automotive fastener market is projected to be worth \$27.42 billion by 2027, registering a CAGR of 4.5% during the forecast period (2021 - 2027).

Numerous factors are propelling the global automotive fasteners market growth, according to a report by Market Research Future (MRFR).

The flourishing automobile industry and the significance of fasteners are driving the growth of the market. The improvements in the durability and quality and technical developments of fasteners coupled with easy replaceable nature of automotive fasteners that makes it convenient for the end use consumers in purchasing fasteners for their cars are also adding to the automotive fasteners market share.

Introduction of strict regulations like EU's Carbon Emission Reduction Targets and CAFÉ Standards are compelling automakers in incorporating lightweight materials for enhancing fuel efficiency. Various fastener companies are unraveling the challenges to reduce the weight of fasteners by developing aluminum and plastic fasteners for various auto applications. This is likely to provide robust opportunities to the market during the forecast period.

The availability of alternatives of automotive fasteners such as welding may act as a market restraint over the forecast period.

The growing unorganized sector is likely to affect the automotive fasteners market value over the forecast period.

By type, the threaded fastener segment will lead the market over the forecast period for its use for the different application like disassembly and assembly of multiple parts and components of any vehicle.

By material, the stainless steel segment will dominate

the market over the forecast period for its resistivity from rust and high tensile strength. Besides, in coastal and tropical areas where vehicles are subjected to corrosive environment, such fasteners play a pivotal part to prevent corrosion.

By distribution channel, the removable fasteners will spearhead the market over the forecast period as these can be removed with ease with power tools sans creating any harm to the vehicle body.

Asia Pacific region will head the market over the forecast period. Increased sales in the aftermarket of fasteners, rapid rise in the sales of automobiles, rise in infrastructure development, trend of using highperformance fasteners, increased sales of different automobiles, large production and sales of cars, government regulations for lightweight vehicles, advances in technology to manufacture durable and lightweight products, manufacturers shifting to customized parts from standard parts, rise in per capita income, large population, and South Korea, India, Japan, and China being the growth engines are adding to the global automotive fasteners market growth in the region.

Besides, increasing automobile production in India and China, a gradual shift of automobile manufacturing plants from the developed economies to India and China, augmented sales of vehicle fasteners in the aftermarket, the presence of several automotive giants, new government guidelines for the use of light-weight vehicles, improvements in technologies to produce lightweight and durable components in the region, and automakers being increasingly interested in standard components for custom components are also adding market growth.

distributor news

All Integrated Solutions (AIS), a division of MSC Industrial Supply Co., announced that it has received an Outstanding Quality Award from Motus Integrated Technologies for a second consecutive year.

The award recognizes AIS for shipping more than 10,000,000 pieces with zero defects in 2020 to Motus, a Tier 1 and Tier 2 supplier of automotive interior products to the world's automakers.

"Although the global created many pandemic challenges for companies in 2020, the entire AIS team was focused and worked hard to ensure that our customers received best-in-class products and service throughout the year. Being recognized by a leading company like Motus for our efforts is very special and rewarding for our team." stated AIS President Nick Ruetz.

AIS, which was founded in 1962, is a leading value-added distributor of industrial fasteners and components, assembly tools, and maintenance, repair, operations and production supplies (MROP). In 2018, AIS was acquired by MSC as the platform for the company's OEM fastener and components strategy. AIS has seven locations in six Midwestern states.

For more information contact All Integrated Solutions at 8625 Industrial Dr., Franksville, WI 53126. Tel: 262-770-3305, email: info@allintegrated.com or online at www.allintegrated.com.

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ICS FLANGE: THINGS TO BE THANKFUL FOR

by Mike Skala

ICS Flange has had a wild and crazy year, I am sure many of your business have been just as crazy as ours. We are all witnessing historic events that hopefully we will never experience again in our lifetimes. Now, we can talk about Covid, but who really wants to? We can talk about price pressures on just about anything in our industry, but we are living price increases every day. We can chat about lead times, stocking levels and employee shortages, but these and many other challenges have become the new reality for each of us.

So, what do I write about for our annual article? The new drinks that I have discovered to drown my stress away? I've thought a lot about this question, and I've come up with three items that I would like to share with you that are important to me.

First, a huge thank you to the employees at ICS Flange. Our sales have more than doubled in the past 8 months. Every month we are setting new records, and I do not see the increased business slowing down any time soon. Originally, I did not anticipate this type of growth for the company, and we were not prepared to operate at this type of capacity. ICS Flange was in scramble mode, and the employees were quickly getting buried with demands.

What first looked like an anomaly in trend data soon became new norms. I did the best I could to get the resources to the employees to help them be successful, but I did not act fast enough or provide those resources quickly enough. There were many days and nights that I was on the floor myself doing what I could to help, but business just became out of control.



Some would say, "You can never have too much business", which may be true, but for the employees of ICS Flange, they were giving everything they had each day, and each day we seemed to fall further behind. That is never a desirable outcome, but they all rose to the demand and worked extra hard to meet our customers' needs. I am so proud of not only their work ethic, but also their dedication to the business. They stepped up instead of stepping out when things got really crazy.

Because of the increased business, we now have new three new warehouse workers, and ICS Flange is still looking for more team members. I purchased new equipment, packing stations and the essential items that make getting orders out more effectively than prior to the growth surge. Our efficiency ratings are now up and on time order shipments are getting better.

In short, I am proud of all the employees, and I can't say THANK YOU enough!

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ND INDUSTRIES INVESTS IN Next generation leadership

When asked what excites him most about his role as General Manager at ND Industries, Paul Sundstrom did not miss a beat. "I'm faced with a sort of never-ending project where I get to test and implement new ideas to solve problems. It's extremely rewarding at every step."

ND Industries specializes in the development of innovative materials and processes which increase the safety and reliability of fastener assemblies. ND Industries manufactures and applies a variety of chemical formulations onto fasteners and assemblies to aid in functions such as locking, sealing, masking, lubricating, and noise and vibration dampening. To remain at the forefront of the industry, ND Industries is forging ahead in search of fresh ideas and new talent. Paul Sundstrom is keen on capitalizing on the opportunity.

Paul, 32, was hired at ND Industries in November 2018 and promoted in 2020 to General Manager of two facilities in Illinois. Prior to joining ND, Paul spent seven years in technical sales, operations, and manufacturing but his journey into the world of manufacturing began before he could drive a car. As a youth, Paul and his brothers spent countless hours in the garage of their home in Rockford tinkering and toying with bikes, gokarts, and whatever else they could get their hands on.

Coming from a mechanically inclined family, Paul fell naturally into the "gearhead" mold. The curiosity of how things worked compelled him to learn more. And more importantly, it fostered the idea of "how can we make this better?"

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These early days proved to be influential on Paul and his brothers. Each brother followed their own path in manufacturing, including Paul's older brother, John, who is the General Manager of an ND Industries facility in Michigan.

It wasn't long before bicycles turned to cars, leading Paul to the automotive industry after graduating with a Bachelor of Science Degree from Northern Illinois University. While working in the ND Industries sales department, Paul learned everything he could about the products, which helped his transition to the operations side and eventual promotion to General Manager.

What is Paul's main focus as General Manager? In his words, "to service the hell out of our customers." ND Industries American-made fastener locking and sealing materials are top of the line, and Paul is determined to provide customer service to match that quality.

Paul took over plant operations after the previous General Manager, John Thramann, retired after over 40 years of service. John helped make ND Industries what it is today. And now Paul has set out to cement that legacy.

Paul approaches customer service with a problem solver's mentality. What can ND Industries do to ensure every customer is left feeling satisfied? Because there is not a one-size-fits-all solution, Paul treats every customer interaction as a unique experience. He ensures that ND Industries works around the customer's needs with a personal touch. To Paul, there is no greater sign of a job well done than a happy customer eager to continue business with ND Industries.



Paul Sundstrom

At the foundation of excellent customer service is organization and accountability. After becoming general manager, Paul restructured his team to play to each individual's strengths in order to get the best out of every employee. With everyone doing their part and reporting to the right people, Paul has facilitated a working environment that reflects the core values of ND Industries.

To further propel ND Industries, Paul is working to renovate the plants. To accomplish this, ND Industries is investing in new equipment to streamline productivity. Paul and his team have fully embraced the new technology, even if it means tearing things down and starting fresh.

Paul Sundstrom hopes to make as big of an impact on ND Industries as ND Industries made on him. Every day motivates him to be better as he pushes forward to leave his mark on the company. He described the General Manager position as the job he will retire with, saying, "not many people get the feeling of being at their last job. It's a great opportunity and I don't plan on wasting it."



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FASTENING vs WELDING: FABRICATING BETTER JOINTS

Introduction

Welding is a proven method of securing infrastructurerelated and fabricated metal joints, and is often the preferred method in a wide range of applications. However, welding it is not without drawbacks that can affect its suitability for a number of applications. As an alternative to welded joints, engineered fasteners can provide significant time and cost advantages, depending on specific project factors and design requirements.

When evaluating whether welding or fastening is best for a particular installation, a variety of factors must be considered. In the final analysis, the type of joint to be specified and fabricated depends on project factors as well as operational preferences.

Project factors that guide the selection of joint type include: the weldability of the materials to be fastened (including surface coatings that may be affected by heat), joint types, installation processes and logistics, inspection requirements, cost, labor availability, accessibility, environmental conditions, safety, and future maintenance/repair considerations. Any or all of these variables can be a potential factor in deciding whether to fasten or weld a joint.

This paper will discuss some primary considerations involved in choosing between welded joints or fastened joints, or some combination of both. By taking these factors into consideration, design engineers, project managers, fabrication supervisors, and construction management can make design and joining decisions that improve performance, increase safety and productivity, and control costs, while meeting and exceeding performance requirements over the lifecycle of the project.



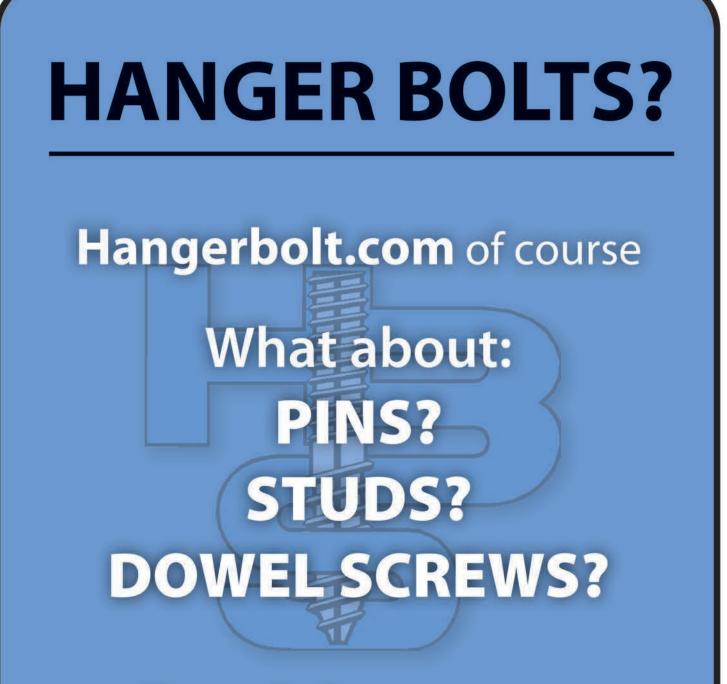
Welding Overview

The process of welding creates permanent joints by fusing two elements with extreme heat, then allowing them to cool in a fixed position. Various types of joint configurations, such as butt-, corner-, edge-, lap-, and tee-welded joints, are determined by the position of welded elements relative to one another.

Welding is a manual process that is typically performed by certified welders using specialized equipment. Specific energy sources may also be required, depending on the type of weld being performed.

Workplace safety is important regardless of joint type, but welding comes with more task-specific risks. In shielded metal arc welding (SMAW), an electric arc is produced between a coated metal electrode and the steel components to be welded. Precautions must be undertaken to avoid burns, vision damage, fume or gas inhalation, radiation exposure, electric shock, and/or fires.

TECHNICAL ARTICLE



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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".

WORKER SHORTAGE AND SUPPLY CHAIN PROBLEMS PLAGUE POST-COVID ECONOMY

Businesses cutting back on hours, factories existing on a single shift, service levels suffering, no one in stores to help shoppers or check them out promptly, tourist areas unable to meet summer demands - these things are all happening as companies struggle with finding quality workers (or even any workers) to staff the front lines of our economy. It's a worker shortage like no one has ever seen. Despite this, there are still large numbers of people unemployed. What gives? Why is there such a mismatch between jobs being offered and the people available to fill them? Will the situation continue? What adjustments to hiring practices should small businesses (and distributors in particular) consider to fill their ranks in these unusual times?

In July the monthly jobs report from the National Federation of Independent Businesses related that 46 per cent of small businesses reported job openings that could not be filled, up from a historical average of 22 per cent. The president of the U.S. Chamber of Commerce, Suzanne Clark, said that solving the worker shortage must be the number one priority facing the country. Business owners and managers have been readily swapping stories of the difficulties they have faced in getting entry level workers, truck drivers, warehouse people and manufacturing line workers. A result of this has been a rash of supply chain disruptions. Goods are not coming off the lines and being shipped readily to outlets because of insufficient people to make it all work. As the pandemic begins to subside, with vaccinations readily available, a growing demand for goods and services has been pent up for some time. The shortages, in turn, have resulted in rising prices as elevated stock market prices, people returning to work, and continued government subsidies to those not working have put a lot of money in circulation chasing the limited supply of goods. This has all resulted in fear of inflation which many of today's workers and investors have never seen.

With so many jobs available, and so many people not currently employed, why isn't the problem solving itself? Some workers are reluctant to go back to work because they genuinely fear Covid-19. Some parents are dealing with child care needs that are not easy to resolve and have come to a realization that the hectic runaround of day care delivery, pick-up and crisis management is just not worth it for the net salary they earn. Some have just gotten used to the plentiful government benefits and see no reason to hurry back as long as the money is still available. Some feel confident enough in their ability to get a job in this environment that they are holding back and waiting for the dream job they always wanted. Because of the high demand for jobs, some of the hard core unemployed have been brought back into play and are receiving offers.

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Robert Footlik

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

WHAT'S CHANGED IN THE WAREHOUSE POST PANDEMIC

As the world slowly gets back to "normal," it's not the same normal of two years ago. There are subtle and overt changes that affect morale, operations and your life.

For those who worked from home their routines, family life and even their pets are following far different paths. Expectations for time budgeting are now more family-centric. With zero commuting time and more time available for things around the house remodeling, landscaping and moving were reprioritized and that may now be gone. And, with the quarantining there was greater introspection which changes philosophies at home and at work. People are questioning their career choices, private lives and relationships. All this has come back to the workplace with them and it affects even essential warehouse staff that worked thru the pandemic. As their family members go back to school, work and social interactions reset everyone must readjust.

As People Return To The Workplace... Even If They Never Really Left

Isolation and stress have created a secondary pandemic of alcohol and drug abuse. This has been exacerbated by the proliferation of marijuana dispensaries. You may have to deal with this substance abuse in the warehouse and at all levels of the company. If there is a new "normal" of acceptance in the executive suite the warehouse staff will demand to be included, regardless of what consequences can occur when inebriation meets a 12,000 pound lift truck. Ignoring this is not a viable option.

In 2020 everyone drove much less, but the road accident mortality rate per miles driven was far higher than 2019. Risky behavior is a major factor in this. With the roads empty people were speeding, cutting into

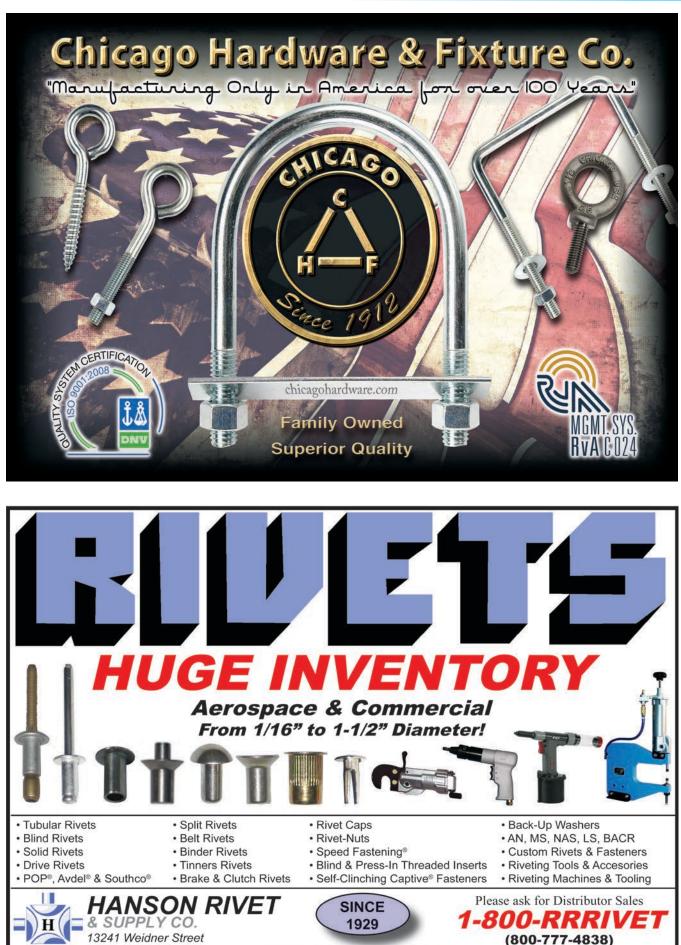
traffic, tailgating, etc. Today with more cars back on the road careless behavior is still going on. Risks that were unacceptable in 2019 are now commonplace. In the warehouse and on delivery vehicles greater vigilance and enforcement of safety rules will be necessary to keep everyone safe. Don't let safety infractions go unnoticed and implement training/retraining to emphasize your expectations. If risky behavior on the highways is abhorrent, why tolerate it in the operations? Vaccination can control Covid-19, but it cannot cure stupid.

Drug intervention agencies have reported increases of over 100% in the number of calls received from people who tried to control stress using alcohol and drugs. This included individuals who were not directly affected by the pandemic...but other family members were. Psychological and substance abuse problems in loved ones will affect everyone. Be aware of this with returning employees and keep in mind that even those who came in everyday are not immune to pressures at home.

What Should You Be Looking For?

There is no universal answer to this question. Local customs, idiosyncrasies of your workplace, individual personalities and many other factors dictate behavior in any situation. What you should do is look for personality changes in your context, measured against what you remember pre-pandemic.

People who were always cheerful and are now dour or even antagonistic will announce themselves. So will those who have turned aggressive. Their new behavior mode can quickly undermine morale and spread to everyone. Unless you are a trained counselor there isn't much you can do directly, but you can facilitate their recovery by steering them to resources who can help.



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FSTNR WEEK - AUGUST 16th-20th HOSTED BY MWFA - DELIVERS by Nancy Rich

FSTNR Week promised Fastener Show, Training, Networking, and Recreation and all was delivered. Fastener industry personnel gathered for the first major event in nearly 18 months. The show, hosted at Belvedere Banquets in Elk Grove, IL, was restricted to 78 exhibits to allow spacing for the exhibits and wider aisles. The fourhour show created a great industry gathering allowing the industry to catch up, revisit sourcing, and discuss industry issues. Besides other safety measure taken exhibitors and attendees had the option to tag their badge with a red, yellow, or green dot to indicate their comfort level of contact. This saved the question of how to approach old friends.

The exhibit hall seemed to buzz of excitement of being together again at a show. So many of the participants expressed their appreciation for the opportunity to attend an in person event again. It was difficult to determine when to hold this year's show but apparently August ended up being the perfect time, before mask mandates returned in Illinois! Thank you to our many exhibitor and attendees for participating in this show.

Training went on throughout the week with the Certified Fastener Specialist Class running the week as well as a Basic Print Reading Class, taught by Mike Henry, on Monday. Fastener industry training has always been a mission of the MWFA's and they took this opportunity to provide education for the industry. Over 40 industry personnel took advantage of the training programs.

Beyond the networking at the show, over 200 attended the MWFA 75th Anniversary and Hall of Fame Dinner, at Venuti's Restaurant in Addison, IL, which provided an amazing networking opportunity. The night opened with music during cocktail hour provided by Strings for Events, while attendees entered on a red carpet for photos. Cocktail hour was followed by dinner and Hall of Fame presentation. Although the MWFA Hall

of Fame was started many years ago, it had been dormant for several years.

The Historical Committee (George Hunt III of Brighton-Best International, Glen Brin of Innovative Components, Paula Evitts of Avante Imports, and Jill Lewis of Integrated Packaging & Fastener Inc.) were instrumental in bringing back the CBNSA/MWFA Hall of Fame. Inductees into the CBNSA Hall of Fame included: Alina Agresto, Richard Binder, Martin Binder, Tom Blakley, Henry Chernow, Craig Cohn, Nick Couzin, Arne Henriksen Sr., Arne Henriksen Jr., Kevin Kaihara, Bill Lang Sr., Howard Langdon, Mark Novak, Don Nowak, Bob Obeler, Nancy Rich and Wally Olczak. Two companies were inducted into the MWFA Hall of Fame: Wrought Washer Mfg. and XL Screw Corp. All these inductees have been instrumental in the success of the CBNSA and MWFA.

The evening continued with a presentation by Matt McMillin, head chef of Cooper's Hawk Winery including a lesson in making a couple of cocktails. Attendee were presented with CBNSA/MWFA 75th Anniversary wine stoppers and bottles of wine with gold etched 75th Anniversary logo. The evening was definitely a memorable evening for the MWFA and the fastener industry!

The next day 128 golfers gathered at Chevy Chase Country Club to enjoy an awesome day of golf. With the great support received, there was a contest on every hole. Golfers began their day with lunch and ended with prizes and dinner. Congrats to the top two teams.

First place: John Butler, Tom Buddenbohn, David Bryne, and John Wachman.

Second place: Oliver Baumann, Brian Christianson, Wes Grobelny, and Andre Lizano. Thank you to Crescent Manufacturing, Rich Cavoto (Metric & Multistandard), Chevy Chase Country Club and B&D Cold Headed Products for donating raffle prizes in addition to those provided by the MWFA.

ASSOCIATION ARTICLE

MID-WEST FASTENER ASSOCIATION TABLE TOP SHOW ELK GROVE VILLAGE, IL - AUGUST 17, 2021



CONTINUED ON PAGE 84



Roman Basi

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

THE PERSONAL HOME EXCLUSION: ENSURING YOUR HOME SALE ISN'T EXCLUDED FROM THIS TAX BENEFIT

It's time to sell your home. For many people, this is an exciting event that symbolizes a new chapter in life. What makes this even more exciting is that, under Internal Revenue Code (IRC) Section 121, sellers can exclude up to \$250,000 of the gain from the sale of their residential home (or up to \$500,000 if a married couple who files joint tax returns is selling). However, like any other tax break, the personal home exclusion

has a strict set of rules that must be precisely followed in order for your sale to qualify. Failure to maintain your home ownership within the parameters of these rules can disqualify your sale from the tax exclusion, costing you thousands of



dollars in taxes. Let's consider the many facets of these requirements to ensure your home sale will qualify.

Preliminarily, the exclusion only applies to the sale of your principal residence. You can only have one principal residence at a time, which the IRS determines with a "facts and circumstances" test. Take these steps to ensure you sell your "principal residence" if you own multiple residential properties: list this home address on relevant documents (voter ID card, tax returns, driver's license, and USPS address). Join a bank and become a member in clubs and groups near this home. Work and reside there if you can. While not all of these factors must be present, the more you can associate with the home, the better.

The IRS has promulgated an "Eligibility Test." The first step is "automatic disqualification" which you will want to avoid. If you acquired your home through a 1031 exchange within the past 5 years you will fail this first step. The second automatic disqualification is being subject

> to expatriate tax. Second is "ownership," which can be more complicated than it sounds. You must own the home for at least two out of the past five years immediately before the sale. But what does it mean to "own" the home? First, if you as an

individual or at least one of two spouses owns the home outright, you pass the test.

If you own only a remainder interest, the sale will only qualify if the buyer is not a related party and you have not already sold an interest in the home What if the home is owned by a business? A single-owner entity that is not treated separately from its owner for tax purposes, such as an LLC, can sell a residence and qualify for the exclusion. The sale by the entity is treated as a sale by the owner since the entity is not treated separately from the owner for other tax purposes.

CONTRIBUTOR ARTICLE



MW COMPONENTS

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INTRODUCING: MW COMPONENTS

MW Industries recently consolidated 21 of its component manufacturing businesses including, RAF, Century Spring, and ASM, under a single umbrella: MW Components.

MW Components is on a mission to help manufacturers accelerate and simplify the process of creating, buying, and managing the complex task of acquiring the precision parts they need. From a custom component designed for a specific application to a stock part from one of the country's largest inventories, this can now be accomplished through a single trusted supplier.

Same Experts, an Expanded Value Offering

MW Components' businesses specialize in producing a wide variety of parts, including springs, fasteners, bellows, couplings, and practically any custom-designed parts manufacturers could require. 20+ manufacturing facilities house state-of-the-art production equipment capable of producing standard and precision components fit for various industries, including aerospace, automotive,

BUSINESS FOCUS ARTICLE

electronics, energy, and more. Additionally, they employ more than 100 specialized engineers ready and able to provide expert advice on design for manufacturability, cost, and performance.

Combining these businesses opens valuable access to knowledge, expertise, and innovations from across the entire breadth of MW's facilities. More importantly, it streamlines designing, ordering, and managing multiple components from one supplier, which offers a tangible speed advantage regardless of the part's application.

Providing Supply Chain Resilience

Today's uncertain economic situation has many manufacturers re-examining their supply chains. Many are focusing on consolidating their vendors to add resilience and avoid costly delays and added downtime created by disrupted global supply routes. As a well-funded US-based business, MW Components can offer the size, scale, and reach to ensure an uninterrupted supply of precision components.

MW COMPONENTS

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Nelson Valderrama

Nelson Valderrama is the CEO of Intuilize, a software Service platform that specializes in helping mid-sized distributors transform data into profits. With more than 22 years' experience as P&L manager executive for major PE firms and industrial distributors. Nelson has dedicated his career to help business uncover hidden competitive advantages and unleash the power of data in the new Digital Economy. For more information contact by email nelson@intuilize.com or visit www.intuilize.com

ADAPTING YOUR DISTRIBUTION BUSINESS TO WEATHER THE STORM

As I write this article in August 2021, we're seeing hoards of distributors and manufacturers struggling to keep up with supercharged demand - and it's still unclear when supply constraints will ease.

Surely, Q4-2021 is going to be one of the busiest times ever for logistics in US history as B2B businesses are still trying to normalize supply chains and retailers prepare to take advantage of the Thanksgiving and Christmas rush.

Materials, products and labor shortages, and shipping delays almost everywhere have led to outsized drawdowns in inventories as companies fight to meet one of the strongest paces of B2B and consumer spending since the 1950s. As a result, the government's initial tally of second-quarter economic growth was missed by a long shot and price hikes and shortages of durable goods are unprecedented.

So, Who Is To Blame And What Can We Do About It?

Some analysts blame many of the recent supply shortages on the popular "just-in-time" theory of minimizing inventory levels in order to keep costs low. While this model is efficient in times of stability, volatility like what we've experienced over the past 18 months can quickly destroy businesses who adopt this philosophy.

Conversely, there are a rare few companies that opted for a "just-in-case" model with higher reserves of safety stock. Toyota, for example, which pioneered the notion of JIT and "Lean" manufacturing supply chains, began stockpiling semiconductors 10 years ago. That's why it's the one major automaker that has enough supply on hand now. While neither model is perfect, it's clear that distributors need better processes for black swan events, such as alternative suppliers or materials. Starbucks, for example, sources coffee from multiple areas in case one has a poor harvest. Likewise, aluminum replaced copper during price spikes.

Perhaps even more importantly, companies need flexible supply chains. When lockdowns began last spring, there were instances of milk shortages while milk was being dumped. Produce rotted in fields while shelves were sparse. These shortages were not caused by a lack of inventory, but by inflexible processes.

As demand shifted to supermarkets from restaurants and schools, these producers lacked flexibility to switch to different labels and packaging types required for retail markets. They had plenty, but of the "wrong stuff."

Today those distributors with deep inventory levels of the "good stuff" are realizing gains for years of hard/ smart work; the end of government stimulus programs, both for businesses and individuals, is likely to create some speed bumps on the road to recovery.

What Can You Do If You Don't Have "Good Stuff" To Sell?

While it may seem daunting finding yourself in this position, I firmly believe that for many organizations, this is the best situation that could have happened. Being cornered by something so catastrophic and unpredictable forces us to re-evaluate our role as a leader, the talent we have, and our business model at large. For those of us that make it through this, I promise you'll emerge stronger than ever and more prepared for what comes your way.

CONTRIBUTOR ARTICLE

<text>



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distributor**news**



Martin Fastening Solutions, a subsidiary of Martin Inc., announced as of September 3rd, the acquisition of Capital Bolt & Screw (CB&S), headquartered in Jackson, Mississippi. CB&S was founded in 1963 and has grown into one of Mississippi's oldest and diverse privately held distributors in the south.



Jerry Gibson, President of CB&S, purchased the company in 1981 and has grown it into a successful OEM fastening distributor with services that include vendor managed inventory (VMI), 3PL services for international customers and integrated services.

"For 40 years, CB&S has held true to our core value of appreciating customer relationships and operating all aspects of our business with the utmost integrity," said Jerry. "When we decided to sell CB&S, we wanted to ensure our customers would continue to receive that same level of outstanding service. We've found that with Martin."

continued on next page ...

distributor news

...continued from previous page

In 1997, Martin added the Fastening Solutions line of business to its operations with headquarters in Jackson, Tennessee.

"We've invested heavily in our OEM/Fastening Solutions business unit over the last five years and established a foundation we can build on," said Douglas Ruggles, co-owner of Martin Inc. and President. Martin Fastening. "The next step in our evolution has been to look for the right distributor to join our current business and help us expand our OEM fastener footprint and customer base. I knew CB&S was a great fit from the start. Their core values and ours line up seamlessly. We cannot be happier to have the entire CB&S Team become part of the Martin Team and to offer our complete portfolio of products and services to their customers to help them operate better."

Capital Bolt & Screw is the fourth acquisition for Martin in the past two years.

For more information about Martin Inc, contact them at 125 North Court Street Florence, AL 35630. Tel: 1-800-828-8116, Fax: 256-389-3436, Email: info@martinsupply.com or visit them online at www.martinsupply.com.

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JIM DERRY AWARDED NFDA'S 2021 FASTENER PROFESSIONAL OF THE YEAR AWARD by Amy Nijjar

The National Fastener Distributors Association is pleased to announce the 2021 recipient of its Fastener Professional of the Year award is Jim Derry of Field (Machesney Park, Illinois).

The Fastener Professional of the Year award was created by NFDA to honor individuals and companies that make a substantial positive impact on people's lives. The inaugural award in 2017 was presented to Robbie Gilchrist of Capital Marketing (High Point, North Carolina). In 2018 Jim Ruetz of AIS (Franksville, Wisconsin) was honored, in 2019 Kevin Queenin of Specialty Bolt & Screw (Agawam, Massachusetts) received the award, and in 2020 Don Nowak of Falcon Fastening Solutions (Charlotte, North Carolina) was honored.

In her nomination of Jim to receive this award, Melissa Patel of Field said, "When I joined the organization, I was 18 years old and didn't have the slightest clue what I wanted for the trajectory for my career. Quite early on it was very evident how passionate, results-oriented, and competitive Jim was. It was a tremendous example of what to aspire to be when I grew up!"

Jim and his brother Bill purchased Field Fastener in 1990. As president and CEO, Jim focuses on Field's longterm strategic plan and ensures that their partners love Field. He is dedicated to enhancing Field's world-class culture that creates an environment that allows their team members to thrive and that is a competitive advantage in the marketplace. Field's culture has been recognized by Great Places to Work and Inc. Magazine as being one of the best small places to work in America. The culture at Field is critical to the growth of the company, averaging 19% per year growth since 1990 and has been on Inc. Magazine's fastest growing private companies eight times in the past ten years.

The overall goal of Field's 10-year strategic plan is to improve lives, and Jim is committed to improving the lives of the Field team members, their families, Field's customers and suppliers, and the communities in which Field operates. Under Jim's leadership in 2020, Field created the Do Good Team. This initiative allows their team members to volunteer up to 40 hours per year focusing on charities of interest to them. The focus of this benefit is to allow



their team members to spend a significant amount of time volunteering in the communities they operate.

Jim along with Bill Derry founded The Derry Foundation, which supports educational initiatives. The foundation provided funds toward the engineering building at Rock Valley College located in Rockford, Illinois. It also helps fund Rock Valley's scholarship program.

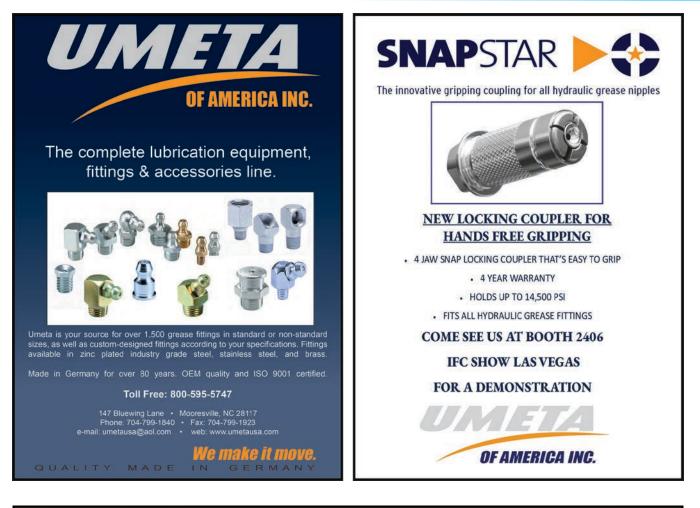
Jim is also a current board member and past president of Carpenter's Place, which provides the tools necessary for rebuilding the lives of the homeless.

Jim served as a Board member and past president of NFDA. Field also is a member of the Mid-West Fastener Association. Jim is involved in Vistage (a CEO peer group that focuses on coaching and best practices) and STP21, which is a best-practices sharing group of distributors from outside the industry.

He is a Six Sigma Black Belt and believes strongly in lean principles to drive efficiency, continuous improvement, and innovation. Jim has a mechanical engineering degree from the University of Illinois.

Jim will receive his award at the Professional Fastener of the Year Virtual Celebration on September 10 at 2:00 PM EST. Nominations for the next Fastener Professional of the Year award will open in January 2022.

To register for the Virtual Celebration visit www.nfdafastener.org or call 562-799-5519.





SOLUTION INDUSTRIES

21555 Drake Road, Strongsville, OH 44149 TEL 1-866-297-8656 FAX 440-816-9501 EMAIL sales



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SOLUTION INDUSTRIES OPEN HOUSE by Laura Vath

As part of the daytime activities of the North Coast Fastener Association's Distributor Social, Solution Industries threw their doors wide open and hosted a day filled with technical classes, taco trucks, facility tours and some good-natured videos highlighting some of the Solution staff members.

Starting at 9:00am, Solution sponsored a class on Hydrogen Embrittlement that was

conducted by Carmen Vertullo and Rob Lapointe of AIM Testing Labs. Approximately 50 people attended the class and were treated to some great technical training in addition to some nifty dancing by Rob Lapointe, as he used his dance moves to visually depict how grain flows as materials move when heated or cooled. Unfortunately, no video of this dancing display was captured or it would be liberally shared on social media.

After the class, members of Solution's Sales Staff and Management Team guided approximately 110 visitors through their new facility and shared some of what is new and exciting at Solution Industries. Following these tours, tacos were served out of a Barrio Restaurant food truck, and guests caught up with Team Solution and other visitors while enjoying the sunshine. Lunch was served to over 160 guests and a few people ended up using various Solution Industries conference rooms as personal offices to return phone calls and jump on their laptops to catch up on emails before they headed off to the NCFA Distributor Social.

Solution ran a series of videos in their common room during the event. Some were clips from previous events and some were recorded specifically for the open house with several self-deprecating, humorous clips that involved just about everyone in the building. These clips will continue to be shared on social media, so make sure to tune in if you come across them. Let's just say, on one of them, General Manager Frank Devito goes out on a limb to give us a different outlook of what casual Friday might look like with a little bit of pressure from ownership. I am sure they will send you a clip if you contact your inside



sales representative at Solution Industries.

Solution Industries rolled out the red carpet to fastener industry customers, suppliers, friends, and yes, competitors. The event was a great success and was part of an overall great day for the NCFA and Solution. However, like most things, there were other companies and organizations that contributed to the success of the event. Raffle winners of Brighton-Best International and Solution gift baskets included:

- ¤ Andrew Pfeifer Atotech
- ¤ Marty Nolan R.L. English
- ¤ Matt Boyd Parker Fasteners
- ¤ Sandra Plummer Nucor
- ^{III} Mike McNulty Fastener Technology International
- ¤ Tom Hutchinson Fastener Technology International
- Duane Drobnich Forest City Technologies
- ¤ Dan Harriger G.L. Huyett

Solution Industries' owner, John Radel openly shared that he was "more than happy to open the doors to all visitors" and that he "was happy just to watch individuals from the industry interacting in person after not being able to do so for such a long period of time." John shared, "I don't even care if people are doing business inside our building that does not even involve Solution...I am just happy to facilitate a gathering of fastener people after such a long time of not being able to meet in person."

Hats off to John Radel, Shelly Radel, Frank Devito, Tim Vath and Laura Vath for coordinating a great event and getting their entire staff involved in the days' activities.



SULTION TOUSTRIES OPEN HOUSE - JULY 8, 2021









CONTINUED ON PAGE 150

ENGINEERED COMPONENTS COMPANY -

1100 Davis Road, Elgin, IL 60123TEL 847-841-7000EMAIL sales@engcomponents.comWEB www.engcomponents.com



ENGINEERED COMPONENTS: 'INNOVATE, DON'T VEGETATE' by Dennis Cowhey, President, Computer Insights

Engineered Components Company was founded in 1983; ECC has continually grown in the areas of technology, market share, and acquisition.

Arne Henriksen did not like the direction the company he worked for was heading. The company wanted to produce for orders as received and not inventory any material. Arne thought they should produce for inventory based on part history and sell from stock. He felt that this approach would better serve the customer and the business. When the company he worked for refused to change, Arne founded Engineered Components Company.

Engineered Components Company, or ECC, is a privately-owned fastener supplier and fastener distributor of standard and per print specialty fasteners. ECC also distributes a multitude of other components that are utilized by original equipment manufacturers worldwide. Their Anchor Bolt and Screw division sells to distributors only with a dedicated sales team, separate from OEM sales, and provides products to countless fastener companies across America that operate in a range of industries.

Why Fasteners?

I asked Arne why he was interested in the fastener industry instead of something else. He shared, "I was in the fastener business since I was ten years old. My father brought home parts for my sister and me to sort out mixed material and gave us a couple of dollars for spending money. This was for Anchor Bolt and Screw Company that he and my uncle started in the '60s. Once you are in the fastener business, you are always in the fastener business."



Truly Unique

Engineered Components Company's motto is "Innovate Don't Vegetate." Their engineering and design expertise has led to multiple patents and customer cost savings. They are proud of their culture, which promotes long tenure, knowledgeable employees, and teamwork. From the start, their focus has been on communication skills and promptness in responding to customer's needs and requests. Being privately owned and full of "professional scramblers" brings flexibility which results in excellent problem-solving.

Their highly-trained sales staff offers an unparalleled level of technical knowledge, service, and personality. With stocking warehouses located across the country that support a variance of VMI and in-plant material management programs, ECC can respond rapidly and effectively to their customers' needs.

ECC's team is one of its greatest assets, from its dedicated assembly crew to its in-house quality assurance technicians.

BUSINESS FOCUS ARTICLE

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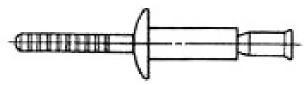


Anthony Di Maio

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.

SECONDARY MANUFACTURING OPERATIONS FOR BLIND RIVETS

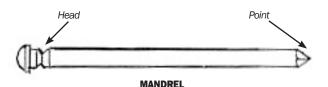
There are secondary manufacturing operations that must be performed to Structural blind rivets to make the Structural blind rivet perform correctly.



STRUCTURAL SELF-PLUGGING PULL MANDREL

The Structural blind rivet has a long mandrel head. The mandrel head also has a sealing ring around it's diameter. When setting the Structural blind rivet, such as Monobolt or Interlock, the long mandrel head will travel the complete length of the rivet body. There is a large degree of friction when the long mandrel head is being pulled the length of the rivet body. Because of this high degree of friction the assembled Structural blind rivet is submerged in a lubricant. This lubricant will dry to the touch but will lubricate the mandrel head and reduce the friction. Without this lubricant the friction of the mandrel head traveling the length of the rivet body is high enough that the mandrel could have a pre-mature mandrel break before the structural rivet is set. This prematured mandrel break will cause a mal-function and the Structural rivet will not clamp the work pieces together.

Many steel mandrels of the Open-End series of blind rivets are also manufactured with a phosphate coated mandrels and these phosphate coating mandrels do not get zinc plated. This phosphate coating to applied



to prevent rusting. This phosphate coating can be a secondary manufacturing operation at the plating department. Many blind rivet manufacturers purchase steel mandrel wire that is coated with phosphate. When the mandrel making machine produces the mandrels the phosphate becomes in contact with the tooling that forms the point and head of the mandrel and deposits phosphate on the point and head of the mandrels. This phosphate prevents the steel mandrel from rusting.

Plating blind rivet mandrels:- The plating department first clean the mandrels in the baskets of their automatic plating production lines. The plating baskets are rotated and have many holes for the plating chemicals to contact the mandrels that are inside the plating baskets. The holes in the plating baskets must be smaller than the diameter of the mandrel. For example, the diameter of the steel mandrel of a 3/32 diameter blind rivet is .0565 +/-.001. The holes in the plating baskets must be less then .053 diameter so that the 3/32 diameter blind rivet mandrel that is .0565 +/-.001 will not enter the holes. If the hole diameter is larger the mandrels will enter the hole in the plating baskets and the mandrels will bend from the weigh of the load of steel mandrels in the turning plating baskets.

CONTRIBUTOR ARTICLE

ALLOY & STAINLESS FASTENERS

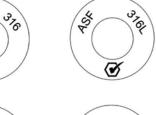


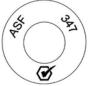
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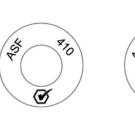
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MATERIAL



4Sr

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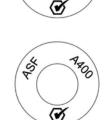
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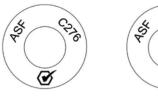
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ASK



LOCK



FLAT WASHER DIMENSIONS

18/8	1/4" TO 2"	1/4" TO 1 1/2"
310	1/4" TO 1 1/4"	
316	#6 TO 2"	#8 TO 1 1/2"
316 METRIC	M8 TO M14	M6 TO M20
316 ELC	1/4" TO 1 1/2"	
317 ELC	3/8" TO 1/2"	
321	1/4" TO 1 1/2"	
347	3/8" TO 3/4"	
410	1/4" TO 1"	1/2" TO 3/4"
ALLOY 20	1/4" TO 1"	3/8"
ALLOY 400	1/4" TO 1"	
HASTELLOY C-276	3/8" TO 1"	3/8" TO 3/4"
DUPLEX 2205	3/8" TO 1 1/4"	
K-MONEL		1/4" TO 1"
F436	1/2" TO 2 1/2"	
LOW CARBON ZINC		1/4" TO 1 1/2"
LOW CARBON HDG	1/2" TO 1 1/2"	

FLAT

STAINLESS STEEL חו

BOLT SIZE	O.D.	I.D.	THK.
1/4"	5/8"	9/32"	.050"
5/16"	3/4"	11/32"	.050"
3/8"	7/8"	13/32"	.063"
7/16"	1 1/8"	15/32"	.063"
1/2"	1 1/4"	17/32"	.078"
9/16"	1 3/8"	19/32"	.078"
5/8"	1 1/2"	11/16"	.078"
3/4"	1 3/4"	13/16"	.109"
7/8"	2"	15/16"	.109"
1"	2 1/4"	1 1/16"	.125"
1 1/8"	2 1/2"	1 3/16"	.125"
1 1/4"	2 3/4"	1 5/16"	.125"
1 3/8"	3"	1 7/16"	.125"
1 1/2"	3"	1 9/16"	.140"
1 3/4"	3 1/2"	1 7/8"	.160"
2"	4"	2 1/8"	.160"

DISC SPRING WASHERS

(Belleville Type) 5/8" TO 1 1/2" STAINLESS STEEL FLAT WASHERS ARE GRADE MARKED EXCEPT FOR THE 18/8.





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THE ADVANTAGES OF SPIROL STANDARD SLOTTED PINS VS ISO 8752 by Jeff Greenwood, Product Sales Engineer

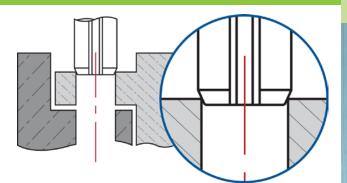


SPIROL manufactures two types of Slotted Spring Pins: SPIROL Standard Slotted Pins and ISO 8752 Slotted Pins. SPIROL Standard Slotted Pins offer significant advantages as compared to ISO 8752 Slotted Pins, which were originally designed to function as Dowel Bushings. Dowel Bushings are used in conjunction with bolts and isolate bolt threads from shear planes. Conversely, SPIROL Standard

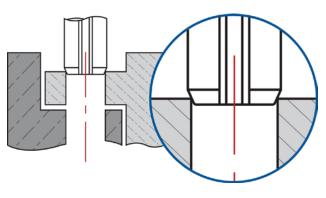
Slotted Spring Pins were designed to perform one of the following pinning functions without the addition of any other fastener: hinge, alignment, retention, stop, or hub/ shaft connection. While both SPIROL Standard Slotted Spring Pins and ISO 8752 Slotted Pins can be effective in an assembly, SPIROL Standard Slotted Spring Pins are easier to install and superior in form, fit, and function.

Chamfer

SPIROL Standard Slotted Spring Pins specify a maximum chamfer diameter to facilitate the installation process and address the common issues experienced with installing ISO 8752 Slotted Pins. For example, a Ø6mm SPIROL Standard Slotted Spring Pin has a maximum chamfer diameter of Ø5.8mm, providing 1mm clearance on either side to facilitate installation into the hole.



SPIROL STANDARD SLOTTED PINS SITS DEEPER IN THE HOLE TO FACILITATE INSTALLATION



ISO 8752 SLOTTED PINS ARE OFTEN DIFFICULT TO INSTALL BECAUSE THE CHAMFER DIAMETER IS NOT MUCH SMALLER THAN THE HOLE

Conversely, since ISO 8752 only requires that the maximum chamfer diameter be "less than" the nominal pin diameter, this often causes installation issues. In other words, a Ø6mm ISO 8752 Slotted Pin chamfer need only measure smaller than Ø6mm. So, for example, a value of Ø5.99mm would be acceptable, leaving only 0.0005mm on either side to help get it started into the hole.

TECHNICAL ARTICLE

distributor **news**

SPIROL International **Corporation** is pleased to announce the receipt of the 2020 General Motors Supplier Quality Excellence Award. Two of SPIROL's locations. SPIROL International Corporation in Danielson, CT, USA and SPIROL Industries Limited in Winsor, Ontario, Canada, each received notification of the awards on July 1, 2021. A Senior Supplier Quality Engineer at General Motors stated, "Suppliers who receive this award recognition have met or exceeded a very stringent set of quality performance criteria and have achieved the crossfunctional support of the entire GM organization for the calendar year 2020."

SPIROL has received the General Motors Supplier Quality Excellence Award every year since it was originally presented in 2012. According to a video presentation by General Motors' top executives Supplier Quality for Development. "Each year, GM recognizes their top performing Supplier Manufacturing DUNS locations around the globe. This General Motors Supplier Quality Excellence Award is for those locations who consistently deliver quality products, on-time, and at-rate and with zero disruptions throughout the vear."



<u>distributor**news**</u>

SPIROL manufactures Coiled Spring Pins, Slotted Spring Pins, Solid Pins, Alignment Dowels and Bushings, Spacers, Compression Limiters, Inserts for Plastics, Disc Springs, Precision Metal Shims, Installation Technology Installation Technology and Vibratory Feeding Equipment. SPIROL supplies millions of engineered fastening components to General Motors' assembly plants located around the world from several global stocking facilities. Tom Buchta, President of SPIROL

Industries in Canada, said appreciatively "This award is a testament to our foundational belief in providing high quality product and exceptional service to our customers. SPIROL is committed to being a reliable supplier to General Motors, and we are proud to have received this prestigious award once again – especially during a turbulent year filled with so much uncertainty attributed to the COVID-19 pandemic."

Since 1948, SPIROL has been providing technical expertise in fastening, joining and assembly to the world's leading manufacturers.

For more information contact SPIROL at 30 Rock Avenue, Danielson, CT 06239. Tel: 1-860-774-8571, Email: info@spirol.com or visit them online at www.spirol.com.



BATCHING SYSTEMS, INC



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Batching Systems, Inc. provides fast, accurate, cost effective engineered automated packaging solutions that can feed a wide range of fasteners into bags, multi cell bags, boxes or other containers for retail presentation. Our equipment is engineered with heavy duty durability to process fasteners 3 shifts a day, 7 days a week. Our product line includes Batchmaster[®] Counters, Weighmaster[®] Weighers, Bagmaster[®] Baggers, and more.

Batchmaster[®] Counters are the only counters that utilize patented dual view scanners that provide the highest accuracy count possible. The latest model BMIV detects and rejects parts one-third smaller or larger than a target part thereby separating (sorting) the good parts from the bad. With our dual view scanning technology, our systems can validate the size of products before packaging to ensure your customers receive only items that are whole, wrapped, connected – whatever is required. Out of tolerance parts are rejected prior to entering a package. The Batchmaster[®] Counter analyzes product at 6,000 scans per second and can run at speeds of 100+ batches per minute. The processing unit is designed with a transparent front panel for visual inspection of gate movement and product flow.

The Weighmaster[®] FAW can weigh or weigh count batches in pounds, ounces, kilograms, or grams. High output speeds result from patented dual chamber accumulation, while outstanding accuracy is due to our unique out of tolerance batch reject system.

A wide variety of fasteners can be fed and singulated with our high speed enhanced geometry dual axis bowl



FULLY INTEGRATED TURNKEY PACKAGING SYSTEM WITH BATCHMASTER® IV COUNTERS, CONVEYOR, AND BAGMASTER® BAGGER FROM BATCHING SYSTEMS, INC.

feeder and change over from one part to another requires no tools and takes less than two minutes. The compact design of the counter and weigher can be run by an operator in semi-automatic mode or can be integrated with a bagger, box or container handling equipment, blister, clamshell or magnetic orientation system. They have state-of-the-art controls incorporating large industrial color HMI's to provide user friendly intuitive set-up, data monitoring, self-diagnostics, and verified motion control technology, bar code reading, recipe management. These systems can be easily connected to various automation infrastructures as well as the internet for remote access, which optimize Overall Equipment Effectiveness and provide our customers with equipment that has less down time, requires less maintenance, and is easier to set-up. Batching Systems can provide stand-alone counters or fully integrated turnkey packaging systems.



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Abigail Leichman

Abigail Klein Leichman is a writer and associate editor at ISRAEL21c. Prior to moving

to Israel in 2007, she was a specialty writer and copy editor at a major daily newspaper in New Jersey and has freelanced for a variety of newspapers and periodicals since 1984.



COVID AND PFIZER: WHAT HAS ISRAEL DISCOVERED SO FAR?

How long do antibodies last, which patients get hit the hardest, how does the vaccine handle the Delta variant – the latest scientific findings from Israel.

Israel has led the world in getting its citizens vaccinated, so it's no surprise that it has also become a center for groundbreaking research into the effects and effectiveness of the Pfizer-BioNTech vaccine against the novel SARS-CoV-2 coronavirus.

How did the vaccine stand up to the original Wuhan variant, then the British and South African variants and now the Indian (Delta) variant of the virus? How long do antibodies last? In which patient populations are infections worst and vaccinations least effective?

All these questions, and more, are being investigated in Israeli labs. Here's a synopsis of research published between January and July:

¤ Covid-19 antibody levels vary according to age and gender, reported Tel Aviv University computational genomic researcher Noam Shomron and Shamir Medical Center's Dr. Adina Bar Chaim.

Analyzing more than 26,000 blood samples revealed that infected females with symptoms have the strongest immune reaction after age 50. Symptomatic infected males have the strongest immune reaction around age 35. The scientists believe hormones account for these differences.

They also noted that the immune response was four times stronger in vaccinated people than in recovered Covid-19 patients. ¤ Older individuals with many underlying medical conditions and immunosuppression are more prone to coronavirus infection and a severe case of Covid-19 even after being fully vaccinated, according to a 17-hospital study published in July, led by Dr. Tal Brosh, head of the Infectious Disease Unit at Samson Assuta Ashdod Hospital.

¤ mRNA vaccines such as Pfizer's do not negatively impact fertility, according to an observational study published in Reproductive Biology and Endocrinology, by a team led by Dr. Raoul Orvieto, director of Sheba Medical Center's IVF Fertility Clinic. Fully vaccinated couples in the study showed no differences in sperm quality, semen volume, ovarian stimulation or proportion of high-quality embryos compared to their IVF cycles prior to vaccination. A Hadassah-Hebrew University Medical Center study similarly found the vaccine to have no effect on sperm parameters.

w When all people living in the same house are vaccinated, the chance of any household member contracting Covid-19 is reduced from 57% to 4%, according to a study conducted by Sheba Medical Center in collaboration with the Pasteur Institute and Sorbonne Université in France. Even when only one household member was inoculated with the Pfizer vaccine, the risk to unvaccinated household members was reduced significantly. An earlier study indicated that fully vaccinated people seem to be protected from Covid-19 even when exposed to infected family members.





Len LaPorta

Len LaPorta is a Managing Director of The DAK Group, an investment bank specializing in middle-market, privately held companies. Len advises business owners on sell-side and buy-side transactions, capital advisory and valuations. He has completed several cross-border M&A transactions, most notably between North America and Europe. Please visit www.dakgroup.com or email Len at Ilaporta@dakgroup.com.

FASTENER BUSINESS OWNERS CONSIDER THE OPTIONS TO EXIT OR EXPAND

The fastener industry is changing and standing still is not an option. Business owners must choose between several financial paths, including investment in growth, M&A activity and cashing in.

During the last 18-months, business owners in the fasteners industry have been confronted with global variables not seen since WWII. For many, the impact of tariffs on the industry continues to pour salt on the battle wound, as well as the on-going choke-point disruption in supply chain brought on by the pandemic. Another issue is COGs (cost of goods sold) high metal prices coupled with ally inflation.

Also consider: what impact does the fastener industry's anticipated slow growth rate of 0.8% have on your business planning? In these low growth scenarios, a business owner is faced with a decision – do I acquire a competitor to gain market share or do I use capital to fund a new product development effort that could take years and not be accepted by the end-markets.

As most industry observers know, the Big 3 end-markets of automobile, aerospace and MRO/ construction make up nearly 75% of the North American addressable fastener market. How do you diversify your business mix when two of the three sectors have been severely challenged from Q1 2020? Yes, we are seeing positive traction with commercial aerospace and automobile production, but we probably need solid quarterly performance through Q3 2022 to declare 'all is well'. Consolidation in the fastener segment will most

likely accelerate as growth through acquisition becomes the model.

Yet another consideration is whether the current administration will solve the tariff environment/level the playing field or, on the domestic home front, table the discussion on increasing capital gains taxes on business owners in the foreseeable future?

This is the perfect time for business owners to make a decision about their future and the future of their company. The fastener marketplace has become more complex and is facing significant changes that will create both challenges and opportunities. Do you have the mental and physical strength to weather another four quarters of choppiness and stress of ownership? Does your next generation of family have the engineering/ mechanical backgrounds to lead the family business to a higher plateau?

Brands and manufacturers will continue to seek vendors who can handle their growing supply chain requirements, as well as make investments in new equipment and more integrated information technology and other capabilities. You may need to ask yourself if these are capabilities you have internally, and if not, how and where you will acquire these skills, experience and competencies.

Many executives and stakeholders are wondering what strategic direction is best for them. They can choose to continue to grow organically, or through acquisitions, finding partners or additional funding.

CONTRIBUTOR ARTICLE

distributor news

The Auto Bolt Company is excited to welcome Todd McRoberts as the Company's Vice President of Sales. Todd will be responsible for managing our internal and external sales force as well as continuing to grow and expand our business.



Well known in the fastener industry, Todd brings over 30 years of experience to Auto Bolt. As a fastener veteran, Todd knows his way around many industries including; automotive, military, truck, and distribution. He has experience working with Tier 1 & Tier 2 Automotive and Truck customers. Throughout his career, he has had great success building and managing many domestic and international sales teams.

True to his roots as an Ohio native, Todd received his BSBA from Bowling Green State University in Marketing and Sales Management. He loves to cheer on the Scarlet and Gray with his wife and two children.

AutoBolt, located in Cleveland, Ohio, is an independently owned manufacturer of quality fasteners since 1948.

For more information contact The Auto Bolt Company by telephone at 1-800-988-BOLT or visit them online at www.autobolt.net.



TEL 1-800-360-1318 FAX 1-262-789-8640 EMAIL sales@gfdsystems.com web www.gfdsystems.com W16056381 COMMERCE DRIVE, MUSKEGO WI 53150 2152 Martin Luther King Jr. Blvd., Suite 1060, Sanford, FL 32771 1-800-962-1614 sales@brikksen.com



www.brikksen.com

ARE YOU SATISFIED? WE AREN'T...



It has been the buzzword in the Brikksen office for the past year. We took an inward approach and pondered how we could improve in every aspect within our organization. How can we take our business model, along with the outstanding customer service we already provide, to the next level? We wanted to investigate the future and then go **BEYOND.**

The initial direction on this journey began with the most important piece of information at the forefront – our customers. How do they perceive us? Does it mirror how we perceive ourselves? We pride ourselves on being flexible and conducting business in the manner in which

our customers want to conduct business: email, phone, e-commerce, or fax. But is there a new way we have not thought of? We are investigating ideas beyond the fastener industry as we diligently evaluate technology, good habits of communication, and an ease of doing business to build better channels for our customers.

Earlier this year, we launched a blog on the Brikksen website named, "Beyond the Nuts and Bolts". Our goal is to capture years of fastener knowledge and to share it freely with the fastener industry and beyond. It is a great resource aimed at educating those new to the industry while providing a refresher to the seasoned veterans. You will find both written and visual content to satisfy all learning styles.

Beyond industry education, Dee Ward launched a thought leadership series on LinkedIn called "The Daily Dozen." (This is also shared on the Brikksen.com blog titled, "Beyond the Nuts and Bolts.") In this 12-part series, he explains the core characteristics that Brikksen personnel must possess. With techniques developed over a 40-year span as a baseball player, coach, business leader, and dad, Dee shares his expertise with those who also are committed to building and coaching successful teams.

This is the beginning of Brikksen's journey. Beyond Measure.

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NCFA 12th ANNUAL DISTRIBUTOR SOCIAL CLEVELAND'S PREMIER NETWORKING EVENT!

On Thursday, July 8th the North Coast Fastener Association (NCFA) held its 12th annual Distributor Social. The venue was held at a new locaton, the Holiday Inn in Strongsville, Ohio. Attendance was strong, with somewhere between 225-250 in attendance. As one of the first industry events to take place since Covid, expectations were high, but guarded. The event did not disappoint.

As has been the case with past Distributor Social gatherings, the festivities begin the night before with fastener industry members gathering at the Brew Garden, also in Strongsville, Ohio. Approximately 30-35 people showed up for some pre-Social networking.



Then, on July 8, Solution Industries got the day started by sponsoring a training class on Hydrogen Embrittlement conducted by Carmen Vertullo and Rob Lapointe of AIM Testing Labs. Through the generous sponsorship of Solution Industries, the class was free to Distributor Social attendees and approximately 50 people partkicipated. Following the class, Solution opened up its facility and provided lunch and guided tours to



approximately 175-180 guests. Tours ran throughout the afternoon and wrapped up as people headed to-wards the Holiday Inn for the Social. OK, there was a quick stop at Johnny J's, a local watering hole, but the Social started on time and no one was lost on the way! Fastener Industry people have an uncanny way of finding these types of establishments.

After skipping this event last year due to Covid, this event has proven to be an industry networking success story with consistent high attendance and a daytime filled with interesting fastener related activities. Attendees came from across the country from California, to Massachusetts and New Jersey and many locations inbetween.

The Midwest Fastener Association (MWFA) always promotes this event with their mem-bers and attendance from that area was strong and they also contributed door prizes that were handed out at the NCFA event.

If this event was any indication of whether fastener industry personnel are ready to return to social gathering, our upcoming shows and conferences should be great events.

For more information regarding the NCFA, please contact the NCFA Office at 440-975-9503, Lgraham@ ncfaonline.com or at www.ncfaonline.com.

ASSOCIATION ARTICLE

NCFA 12th ANNUAL DISTRIBUTOR SOCIAL STRONGSVILLE, OH - JULY 8, 2021



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INDUSTRIAL FASTENERS INSTITUTE

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IFI ANNOUNCES THE FIRST RECIPIENT OF JOE GREENSLADE YOUNG LEADERSHIP AWARD

The inaugural **Joe Greenslade Young Leadership Award** will be presented to John Medcalf of FIELD Fasteners and PEAK Innovations Engineering at the 2021 Fall Meeting of the Industrial Fasteners Institute (IFI) in Memphis, Tennessee.

IFI announced the first ever Joe Greenslade Young Leadership Award, instituted in memory of Joe

Greenslade, who served as IFI Technical Director from 2007 to 2015. The Award recognizes individuals who, early in their career, have contributed in a significant way to the fastener industry. One of Joe Greenslade's passions was to mentor and encourage young people to reach their full professional potential. In the spirit of its namesake, the Joe Greenslade Young Leadership Award recognizes the importance of upcoming generations to the continued success and evolution of the fastener industry.

John Medcalf, serves as Principal

Engineer at FIELD Fasteners and PEAK Innovations Engineering in Machesney Park, IL, and is the first honoree to receive the Joe Greenslade Young Leadership Award in recognition of outstanding contributions in the first 10 years of his career to the development of standards for the fastener industry and to original scientific knowledge on hydrogen embrittlement of case-hardened screws. The award will be presented at the 2021 Fall Meeting of the Industrial Fasteners Institute (IFI) in Memphis, Tennessee on October 5, 2021.

A graduate of Mechanical Engineering from University of Illinois at Urbana-Champaign, John Medcalf joined FIELD Fasteners after graduating in 2009 as Applications Engineer. With the encouragement of Joe Greenslade himself, John began to participate in fastener standardization committees beginning in 2012, gradually

taking on greater leadership roles. John joined ASME Committee B18 (Fasteners) in 2012, serving as chair of subcommittee B18.16 – Nuts from 2014 to 2021, and chair of subcommittee of B18.4 – US TAG to ISO/TC 2 since 2021. He joined ASTM Committee F16 (Fasteners) in 2013, serving as chair of subcommittee F16.97 –Coordination of North American TAGS to ISO/TC 2

> since 2015, and chair of subcommittee F16.96 – Bolting Technology since 2019. Through ASME subcommittee B18.4, John joined the delegation representing the United States at ISO Committee TC 2 (Fasteners). He served as head of the US delegation for 2016 plenary meetings in Shanghai, China, and has since made important technical contributions on behalf of US positions. In 2016, John earned a master's degree for his thesis on susceptibility to hydrogen embrittlement of casehardened steel fasteners, a research

project that was sponsored by IFI under the guidance and support of Joe Greenslade himself. A subsequent journal publication, co-authored by doctors Brian Thomas and Salim Brahimi, was referenced in ISO/TR 20491 Fundamentals of hydrogen embrittlement in steel fasteners, and provided the technical rational for the revision of several important fastener standards, notably ISO 4042 and ASTM F1941 (electroplating), and ISO 2702 (case hardened screws), and ASME B18.6.3 (machine, tapping and drive screws).

Submit A Nomination

Visit IFI's website at www.indfast.org/info/award to submit a nomination for next year's Joe Greenslade Young Leadership Award or the Soaring Eagle Award program.



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WEAK LINKS IN YOUR SUPPLY CHAIN? FIND ANOTHER DISTRIBUTOR

We haven't seen it for generations... high demand for fasteners in the midst of a materials shortage. Projects are green-lit, but weak links in the supply chain (along with a pandemic-induced labor slowdown) are stalling progress. For the first time in a long time, OEMs and MROs are scrambling for parts.

The lucky ones already have relationships with distributors who built their reputation on stocking products in anticipation of incoming orders. But that only happens when those distributors have forged their own long-running partnerships with top manufacturers. Working together, they ensure coveted items like retaining rings, pins and clamps will have near-normal availability in the face of a global shortage.

BUSINESS FOCUS ARTICLE

° 42:

If you are NOT one of the lucky ones, consider starting a relationship with a new distributor. When the rubber meets the road, your provider should be rock-solid on four fronts: quality, availability, reliability, and technical support. Shopping on price alone is risky. When cheaper parts fail due to poor quality, the front-end savings aren't worth the downtime & repairs. And the misery index doubles when you can't find replacement parts. It's a vicious cycle, and totally avoidable.

Since 1982, we have built our business on manufacturer relationships. Prospect Fastener is a master distributor of Driv-Lok, Kerr Lakeside, KMC Stampings, and Rotor Clip products. These are challenging times. But we're ready to move mountains to keep your operations on track.

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Thread Repair Kits



Installation Kit: Solid wall inserts for metal



Installation Kit: Coil inserts for metal



Assortment Kit: Solid wall inserts for metal



Installation Kit: Knife Thread inserts for wood



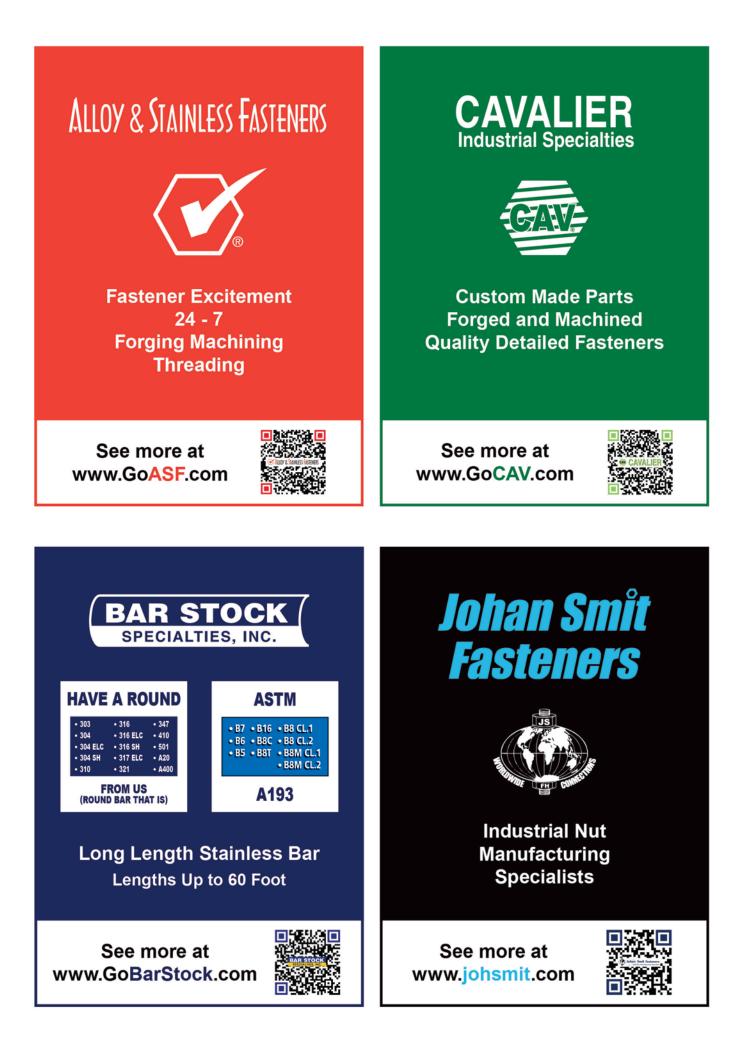
Assortment Kit: Knife Thread inserts for wood



Assortment Kit: Hex Drive inserts for wood







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STRENGTH IN THE FASTENER INDUSTRY

In the building industry, considering which fasteners to utilize plays a major part in planning and executing a safe, successful project. Used in just about every instance you can imagine, and in various materials-wood, steel or masonry substrates-fasteners hold it all together.

Intercorp is one of the businesses ensuring that strength endures.

Founded in 1988, Intercorp is an industry leader in the fastener distribution business. Their flagship brand, Strong-Point, is sold by thousands of distributors to building professionals across the United States. The brand consists of a variety of high-end fasteners for selfdrilling, drywall, stainless steel, needle point, outdoor, woodworking, pole barn, outdoor, concrete and cement board applications.

"Intercorp places a very high value on being more than just an importer and master distributor of fasteners," explained David Harlan, director of marketing at Intercorp. "We understand the challenges our customers face. We listen to their concerns and collaborate with solutions that enhance our relationship to benefit our customers. We are constantly evolving, whether streamlining our speed to market, or utilizing co-op dollars to promote customer growth and our Strong-Point brand.

Intercorp takes their distributor support to a new level by sending their distributors referrals as well as sharing their contact information on their website within their Distributor Locator. For end-users, finding a distributor for Strong-Point products has never been easier. From co-op marketing to referrals. Intercorp promotes its products and distributors. It's that type of partnership and support that has grown Intercorp's loyal distributor base into the thousands.

Once fasteners hit the jobsite, Intercorp continues to show strength and flexibility there too.

It's an undisputed fact in the construction world that



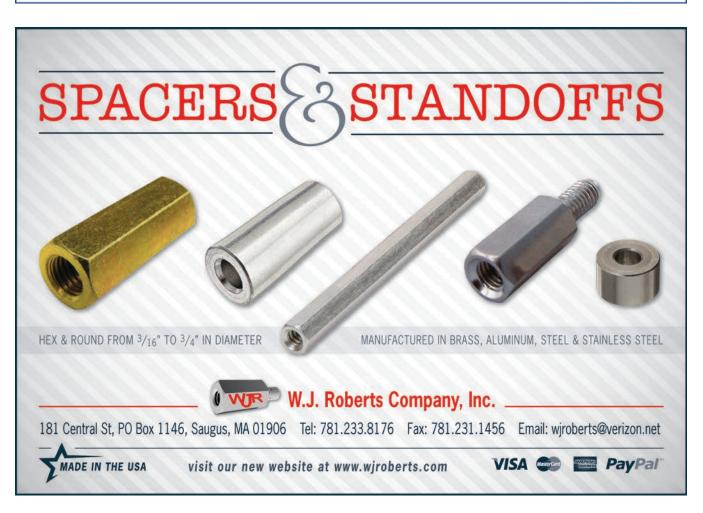
if materials do not meet all necessary specifications, they will be rejected. Rejected fasteners create downtime and money lost for a contractor. Architects, specifiers, and engineers all require technical data to make sure that materials-even fasteners-provided on the jobsite meet their specifications. That is why Intercorp goes above and beyond for their end-users and their distributors by providing all documentation upfront, without the hassle of document searches. Intercorp's 234-page submittal guide includes data on every Strong-Point product sold, so there is no guesswork on whether or not a fastener meets the necessary criteria.

Not only that, Intercorp also offers a submittal request form on their website where more unique requests can be made by the distributor, engineer, or end-user. "We answer all of those unique requests quickly upon the question hitting our inbox," elaborated Harlan. "We get that time is money, and time can affect how our customers deliver on their project."

For Intercorp, it is about strength in holding the industry together and ensuring that every step in a project-from purchasing to distribution to acquisition to construction—is seamless.

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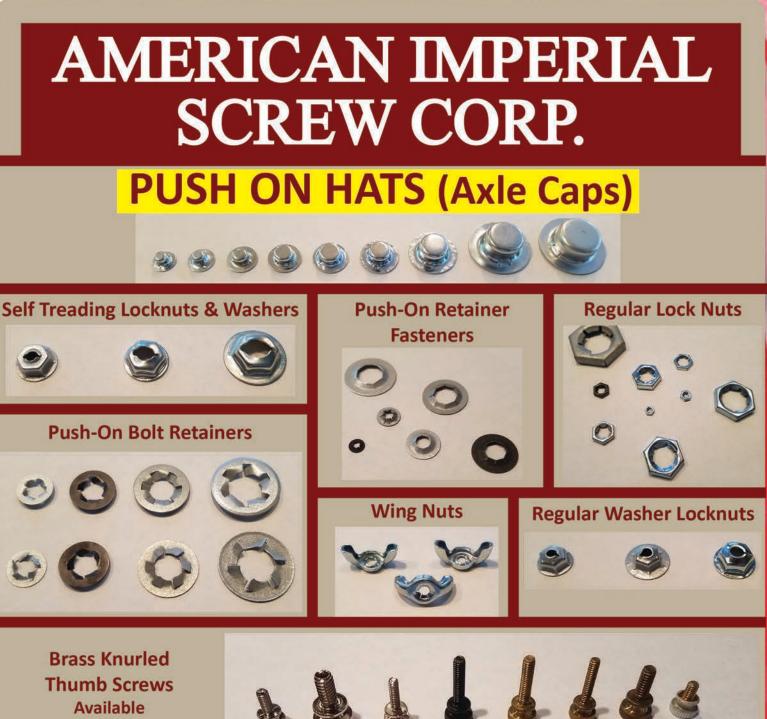




MID-WEST FASTENER ASSOCIATION TABLE TOP SHOW ELK GROVE VILLAGE, IL - AUGUST 17, 2021



CONTINUED ON PAGE 90



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Distributor input invited FIDI Fastener Distributor Index www.tdisurvey.com

distributor news

International manufacturer and master distributor of fastening solutions, **Earnest Machine**, is celebrating after being awarded the NorthCoast 99 award for the 9th time in ten years. The award celebrates strong work culture and talented people - something that Earnest takes great pride in.

This annual recognition program aims to honor 99 great Northeast Ohio workplaces for top talent each year. Earnest also received special recognition as 2021's NorthCoast winner for organizational strategy, policies, and benefits.

After being recognized as a top employer and as the winner of the organizational strategy, policies, and benefits, the company is taking pride in its unique organization structure, which it describes as a 'jungle gym'. This is thanks to its flat structure, which gives everyone opportunities to get involved at each level and across departments, as opposed to a typical corporate ladder which sees employees strictly move in one direction.

These latest accolades join a wealth of other workplace recognitions, including Crain's excellence awards in HR 2019 & 2020 and as a Smart Culture 2017 honoree.

The importance of an employee-friendly and progressive culture is engrained in in the ethos of the company, as explained by Elise Bastian, Director of Culture and Talent Development at Earnest Machine: "We recognize that it is our employees that make this, and all of our other successes, possible! Earnest employees are encouraged to engage and lead, which fosters our creative and passionate environment. We're enthusiastic about employee wellness, fulfilment, and recognition – which is why awards like this mean so much to us!

"Just like our customers need good parts to make machines, we need great parts, people, to make the Earnest Machine. That's why we focus so much on our work environment and culture."

Earnest is doing things differently. Putting the needs of industrial distributors, MRO suppliers, and Vendor Managed Inventory companies first, providing them with the best customer experience possible and helping those distributors win in the industrial distribution industry.

For more information contact Earnest Machine Products by tel: 1-800-327-6378 or visit them online at www.earnestmachine.com.

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by JOHN WOLZ EDITOR editor@globalfastenernews.com



WÜRTH TESTS HYDROGEN VEHICLES FOR FLEET

Adolf Würth GmbH & Co. KG has decided to gradually convert its vehicle fleet to alternative fuel vehicles for sustainability reasons. To obtain some first-hand experience in this field, sales representatives will test Toyota Mirai hydrogen vehicles over a test period of three months.

The special qualities of hydrogen vehicles: When transforming hydrogen into electric power, hydrogen vehicles do not create any CO2 emissions or other harmful greenhouse gases. Water is the only by-product.

"We want to test the potentials of alternative fuel engines, in order to create a more sustainable vehicle fleet. The vehicles' mileage and practical advantages in our everyday operations will be important factors in these tests. Financial aspects do play a role as well." Norbert Heckmann, Chairman of the Management of Adolf Würth GmbH & Co. KG

Infrastructure is another essential criterion: Currently,

BUSINESS FOCUS ARTICLE

there are 126 hydrogen fueling stations in Germany that the sales reps selected for this test have easy access to.

Two vehicles were handed over to the sales reps at the company headquarters in Künzelsau-Gaisbach.

"It is great to see that our sales representatives are willing to test these models. They will act as role models for all their co-workers." Torsten Elias, Managing Director and Head of Sales at Adolf Würth GmbH & Co. KG

Two Lexus UXE electric vehicles were also included in this test phase. The vehicles are provided by WELLERGRUPPE Holding SE & Co. KG, whose managing director, Burkhard Weller, is also a member of Würth's Customer Advisory Board.

Changing over the company's vehicle fleet to alternative fuel sources is just one of the measures Adolf Würth GmbH & Co. KG is taking to achieve its climate targets: The goal is to be carbon-neutral at all German company sites by 2024.

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LIVE EVENTS ARE BACK! by Amy Nijjar

We are excited to bring back Pac-West's popular After Hours networking events. Here's the schedule:

- ¤ October 7 Bay Area CA
- x November 4 Corona CA

Check our website www.pac-west.org for locations and times. We are excited to see everyone again!

Join Us In San Antonio October 20-23

We are partnering with the Southwestern Fastener Association to bring you timely education and lots of fun in the great city of San Antonio, Texas. Here are some of the highlights, with more still to be confirmed:

- Economic Update by Dr. Chris Thornberg
 (a Pac-West favorite)
- Fastener Industry Update by Tim Roberto Jr.,
 Danielle Riggs (Würth Industry North America),
 and Mike Bailey (Nucor Fastener)
- Grow Your Company and Its Capabilities
 presented by Texas A&M
- ¤ Craft Brewery Tour with Texas Barbecue
- Cookie Decorating Tips spouse program by the award-winning Suzy Cravens (Advance Components)
- p Dinner at The Buckhorn Saloon and Museum

All details can be found at www.pac-west.org or www. southwesternfastener.org.

It will be a worthwhile and fun trip. Y'all come!



Tabletop Show Scheduled For 2022

It's not too early to save the dates of March 16-18, 2022 for Pac-West's Spring Conference and Tabletop Show, which is moving from Long Beach to the Westin Anaheim Hotel. You can start making plans to bring your family for some Disney fun!

Pac-West Members Eligible For Discounts On IFI Technology Connection Subscriptions And Manuals

Now there are even more reasons to be a member of Pac-West. Exclusive discounts on the following programs offered by the Industrial Fasteners Institute are now offered to Pac-West members:

- ¤ 10% discount on subscription renewals for IFI Technology Connection
- 20% discount on new subscriptions to the IFI Technology Connection
- 20% discount off the print edition of the
 IFI Inch Fastener Standards book

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ASSOCIATION ARTICLE



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NySeal[®] 2.0 provides a fresh solution to an ageold problem in fastening - under head sealing. Most under head fastener sealants on the market today squeeze out of the joint during installation, making tightening strategies complex, and reusability uncertain. In contrast, NySeal[®] 2.0's durability allows for multiple installations, while still meeting and exceeding required sealing test thresholds. Its durability is achieved through an advanced polymer formulation; this formulation was developed with a focus on several material properties including hardness, malleability, and its ability to adhere well to steel substrates. Nylok® 's NySeal® 2.0, has all of these characteristics, so much so that at least one major OEM has declared NySeal® 2.0 to be a "best in class material" for under head sealing. NySeal 2.0 is also known as "The King of Under Head Sealants," due to its exceptional durability.

NyShield® is a unique coating that is applied primarily to steel fasteners, allowing the fasteners to

BUSINESS FOCUS ARTICLE

be in contact with lightweight materials (magnesium, aluminum, stainless steel, carbon fiber, etc.), without creating a galvanic cell. This cell leads to accelerated corrosion propagation. Prior to introduction of this product, fastener engineers had few options for securing lightweight materials, especially in demanding automotive environments. The few options available were bulky and expensive, and compromised the guality of the fastened ioint. Some of these included aluminum fasteners or washers, and exotic material combinations. NyShield® is applied quickly in a high-speed manufacturing process. It satisfies corrosion cycles simulating 15+ years in the field, and doesn't create joint loosening, even when placed under the fastener head and subjected to high compressive forces. This means that, with NyShield®, there is no fear of clamp load loss and subsequent joint loosening in application. This product has one additional attribute; it has also been used for electrical isolation, due to its exceptional dielectric properties.





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distributor news

At its recent annual meeting and awards ceremony, the Industrial Fasteners Institute (IFI) awarded the 2021 Soaring Eagle Technology Award to Chad Larson, President of **LeJeune Bolt Company.**

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

During his 30 years in the industry Larson has made significant contributions to the fastener industry, including the widely acclaimed compilation of six divergent ASTM standards into the single coherent ASTM F3125 document. Along with his impressive committee work Chad is also the inventor of record of the TNA® Fastening System, the revolutionary torque + angle technology incorporating F3148 TNA bolts and the newly published RCSC Combined Method of installation. He currently holds 8 worldwide patents for the system. These contributions, along with many others, will leave a significant and lasting legacy for generations of fastener professionals to come.

LeJeune Bolt Company, headquartered in Burnsville, MN, with a West Coast office in Chino, CA, is an international distributor of structural grade fastening systems, installation tools, and related fasteners for the commercial steel and concrete construction, bridge building, and transportation markets. Our products include; TNA® Torque + Angle Fastening System, Structural Bolts, Anchor Bolts and Threaded Rod, Weld Studs and Equipment, Industrial/OEM Fasteners, and Installation Tools and Equipment.

For more information contact LeJeune Bolt Company at 3500 West Highway 13, Burnsville, MN 55337. Tel: 1-800-872-2658, email:sales@ lejeunebolt.com or visit www.lejeunebolt.com. or www.tightenright.com.

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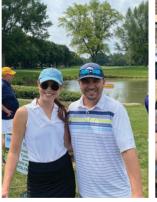








































CONTINUED ON PAGE 116





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ROB LaPOINTE MAGNETIC PARTICLE TESTING VS. PENETRANT TESTING – WHICH TEST IS BEST? from page 8



FIGURE 3 - A CUTAWAY SECTION OF A FULLY THREADED STUD SHOWING A VOID OF MATERIAL KNOW AS A BURST

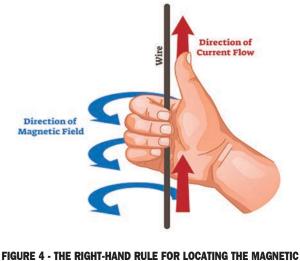
ASTM F788, Standard Specification for Surface Discontinuities of Bolts, Screws, Studs, and Rivets, Inch and Metric Series, provides us with a list of and examples of surface discontinuities common to fasteners. F788 also provides tolerances for allowable discontinuities.

Discontinuities that are not open to the surface such as internal voids, internal bursts, or inclusions are not able to be detected by PT and many are not detectable by MT. Magnetic particle testing does offer the ability to detect subsurface discontinuities provided they are close to the surface and the technician is skilled at spotting them. Figure 3 shows a subsurface discontinuity that would not be detectable by penetrant or magnetic particle testing. The burst in Figure 2 is not connected to the surface and is too deep below the surface for the possibility of detection by MT. For discontinuities like these, other NDT methods like ultrasonic or radiograph testing would be useful. These methods can image the inside of something without cutting it open. They are essentially the same as the medical techniques used to image unborn babies (ultrasound) or a broken leg (x-ray).

It would also be worth our time to understand a little more about nondestructive testing. Nondestructive testing is just that – nondestructive. This testing does not destroy, mark, or otherwise injure the part to collect data. Specifically, nondestructive testing accesses the quality of the material and workmanship of the product to ensure that there are no hidden flaws that would render the part unfit for service. Also, since it's nondestructive, test parts can be sold and used along with the production lot after testing. For highly controlled products, it is common for 100 % of the production lot to be tested for flaws using a nondestructive method.

Nondestructive testing includes many detection methods such as Magnetic Particle Testing (MT), Penetrant Testing (PT), Visual Testing (VT), Ultrasonic Testing (UT), Radiographic Testing (RT) and many others. Personnel training, qualification and certification is typically an employer-based system through guidelines provided by the American Society for Nondestructive Testing (ASNT) using the SNT-TC-1A standard and the National Aerospace Standard NAS 410. It is a highly technical and regulated branch of materials testing.

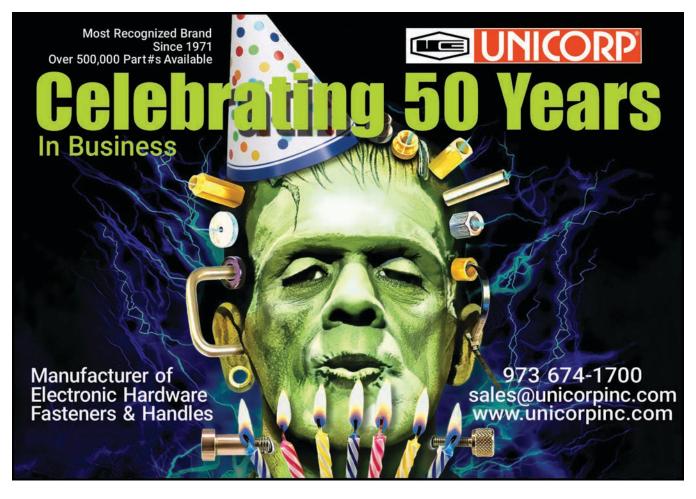
CURL RIGHT HAND RULE



FIELD RELATING TO AN ELECTRICAL CURRENT

Magnetic particle testing makes use of magnetic fields created by the flow of charges to detect breaks or discontinuities in conductive and magnetizable materials. To understand how this works, we need to be acquainted with some physics of electromagnetism. Don't worry, we won't be deriving Maxwell's equations here, just some basic spatial relationships between electrical current and magnetic fields.

When electrical current (electrons) flows through a metal, a magnetic field is created which incircles the flow. Physics students around the world use what's called the "Right-hand Rule" for understanding this relationship. Figure 4 shows the right-hand rule. Notice that if your right thumb points in the direction of the current, then your curled fingers point in the direction of the magnetic field created by the flow.





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BRUNO MARBACHER DRIVING SYSTEMS FOR FASTENERS - THE VERTICAL WALLED SYSTEMS from page 10

¤ There is no cam-out effect with this drive, however, shallow socket drives, the corners may be rounded during tightening and loosening.

¤ This drive can be reused serval times. Shallow sockets require more careful handling to make sure they can be reused.

Other critical features do not apply or are not prominent.

Shallow Socket Drives

Low socket cap screw per DIN 6912 have shallow sockets with a pilot hole. They are used in applications where head height clearance is restricted. This drive has a cylindrical pilot hole at the bottom of the drive to accept a similarly sized socket key with a pin that functions a guide. However, because the pilot hole extends past the head of the fastener, DIN 6912 will never be threaded completely up to the head. If you require a metric low head socket that is fully threaded, one should choose one per DIN 7984. The screws with shallow socket have to be tightened with a lower torque. There is technical literature available that lists recommended tightening torques.

The shortcomings of shallow sockets apply to inch socket drives as well.

Double Hex Drive Twelve-Point Socket

The Double Hex Drive has two overlapping rotated hexes. It looks similar to a spline drive screw, but they are incompatible; standard hex keys can be used with this socket drive.

Doubles hexes are more likely to become stripped. They are most likely to be used on set screws where the socket can be deeper.

Compared with the 6-point socket, a 12-point socket has twice as many points, given us more options to align the tool (key).

Torx

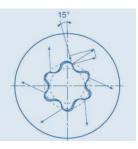
The hexalobular socket screw drive, often referred to by the original proprietary brand name Torx. It uses a star-shaped recess with six rounded points. Torx is also known as six lobe drive, six lobular drive, or T sockets.

It was designed to allow higher torques transfer from

the driver to the bit compared to other drive systems. The drive was developed in 1967 by Camcar Textron.

Feature & Concerns:

¤ Torx is very popular in the automotive and electronics industries because of resistance to cam-out, and extended bit life, as well as reduced operator fatigue by minimizing the need to bear



down on the drive tool to prevent cam-out.

n In comparison to cross recesses and hexagon sockets, hexlobular drives engage better. They do not cause stress riser, nor do they wear out as much.

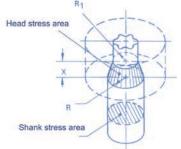
¤ Torx has a very high torque capability. It has, however a poor off angle capability, the driver basically has to be as inserted at a straight angle

¤ Torx is a very durable drive, offering repeated assembly, ideal for maintenance and repairs.

¤ Same drive size for Inch or metric screws, making it easier to convert to metrics without a tooling change.

¤ Its stick fit property is excellent, it holds the screw to the driver bit very well.

The head tensile
 stress area must be
 larger than the shank
 stress area, 1.4 x
 larger for regular
 tensile testing, 2 x
 larger if fasteners are
 subjected to wedge
 tensile test.



If the head stress area is smaller than the stress area in the shank, the head may twist off during assembly. This is essentially true to all socket drives.

Other critical features do not apply are not prominent.

Torx Plus

Developed in 1992, it is Intended to provide extended tool life over a standard Torx system. Can incorporate additional advanced features to improve use with automated equipment or where stick fit is required. Torx is defined by radii, the Torx Plus by ellipses.



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CHRIS DONNELL ISSUES FACING THE TRANSPORTATION WORLD from page 12

[4] More and more carriers are limiting IPI (Inland Rail) cargo and the importers who require such service are finding that those still offering this service are being inundated with bookings, further causing delays at the start of the shipping process. Importers now need to look at alternate ways of shipping to get their goods to the cargo's final place of delivery, such as trans-loading. The reasoning behind the carriers' election to suspend this type of service is they want the containers to be returned sooner so they can return the equipment to its origin quickly. The result: increased costs; more strain on localized truckers to pick cargo up at the port; and, the warehouses handling the transloads are overwhelmed.

[5] Rail carriers on both the West and East Coasts are limiting the cargo that is being sent into the Midwest to combat rail terminal congestion. Union Pacific (UP), Burlington Northern Santa Fee (BNSF) and Norfolk Southern (NS) are all monitoring the situation and holding containers back at the port of arrival instead of putting them on the rail. This further buries the rail terminals in locations such as Indianapolis, Chicago, Kansa City and many others. The sheer amount of cargo stranded at rail terminals around the country is staggering. Because of this, most terminals are reducing the available free time regardless if the container is accessible to a driver to pull out or not. Importers are seeing the costs of detention or storage at the rail increase dramatically.

[6] With the surge in buying demand, many importers are looking to air freight to help alleviate the pressures they are under, stock shelves today, and gap buying more and more. However, over the past week we've seen the air freight market take a major hit as one of the largest air cargo hubs in the world, Shanghai's Pudong Airport, was shuttered when a baggage handler was diagnosed with Covid. The result was the grounding of 1000's of flights, passenger and freighters, that were cancelled as cargo at the airport ground to a halt. While air freight rates since the pandemic began have risen, they haven't increased at the same rate as ocean. Today air freight is now equal to about 6 times the cost of ocean; whereas, pre-pandemic it was roughly 20 times or more costly than shipping via ocean. With this airport closure, everything will change. Analysts are predicting that air rates could reach upwards

of \$20.00 USD per kilo by late fall, a level that has never been seen and higher than what the previous record was in early 2020 when the market average was around \$15.00 USD per kilo and the carriers were primarily moving PPE equipment.

I started this article with the comment that it would be difficult for some of you to imagine the market getting worse, yet it is. Make no mistake about it, carrier capacity will get worse as most of your big box retailers will now absorb upwards of 30% of the available capacity in the market as they prepare to bring in their goods for the holiday season. Ocean rates will continue to rise as the demand for ocean cargo is still surging. Rates today have risen by more than 500% compared to the same time in 2019 and the carriers are announcing more and more increases as we enter the prime shipping season.

Many of you are wondering what you can do to weather this storm, minimize, or eliminate disruptions. There is no easy or quick answer. I do have some suggestions which, if applied, can help you and your company obtain a better understanding of what's happening in the transportation industry as well as what you can do to minimize the disruptions. The congestion and increasing costs are real and felt by everyone. What's happening in the transportation world is truly the perfect storm, one that was put into motion 30 years ago, and the end game it what we're all going through today.

[a] Be loyal, be supportive and build upon the relationships with your suppliers, manufacturers and logistics companies. We are all in this together and as the saying goes "it takes a village to raise a child", likewise, it takes collaboration between everyone to minimize the difficulties currently facing the global market. There is a pecking order to whose cargo moves and it all starts with those clients who are loyal, and those with long term relationships. Right now, that trumps anything in the logistics world.

[b] Forecast, forecast, forecast!! Help your logistics provider by providing them with a detailed forecast depicting your shipment needs for the next several months. This will help the logistics provider determine how much space they are going to need not only for your cargo but their other clients as well. This could ultimately result in your paying less for transportation.



CHRIS DONNELL ISSUES FACING THE TRANSPORTATION WORLD from page 104

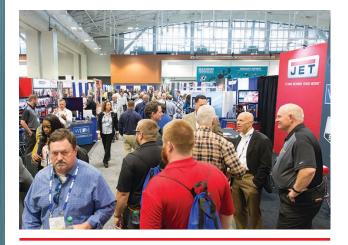
[c] Be flexible. Look at alternative shipping options such as routing only to the west or east coast ports and trans-loading containers there. Overall, I think you will find that costs are relative and you might be able to get your cargo sooner versus relying on the rail. You must also be flexible with costs. No one enjoys paying these outrageous costs, but sitting on cargo will only result in two things: first, your supplier can cut off manufacturing of your product; second, the rates are only going to get higher so waiting will lead to paying more for freight than what was originally quoted to you. If you can get space, take it. Make sure your suppliers are meeting the in-gate dates at the port to avoid paying higher costs.

[d] Consider using alternative shipping equipment. With ocean carriers frowning on heavy dense cargo in 20'ft containers, consider using a 40'ft container, they are more prevalent than the small version. Many don't understand that the cost for a 20'ft container is roughly 90% of that of a 40'ft. If you have a mixture of dense and light cargo, look at 45 foot containers. I often find that we can get better costs for a 45 foot container over a 20 foot container. Another option, if your cargo doesn't require a lot of blocking and bracing, is to inquire about the use of NOR (Non-operable Refrigerator) containers which can be found and are considerably less than the cost of a 20 foot container.

[e] Last but not least, be informed. Companies that are oblivious to what's really happening in the world of transportation take the hardest hit. Demand your transportation providers keep you informed. Demand that they not only tell you what's happening today, but what they have forecasted in the future. Trust me, in today's marketplace things are changing daily, don't you want to know what those changes are and be able to adapt to them? Keep in mind, knowledge in today's society is extremely valuable and by not having it you are putting your cargo and supply chain in peril.

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STAFDA IN-PERSON CONVENTION & TRADE SHOW IN ORLANDO from page 14



William (Bill) Taylor will keynote STAFDA's General Session on Monday, October 25. Although people might not recognize Taylor's name, they know his entrepreneurial business magazine: Fast Company. Fast Company covers innovative business leaders with cutting-edge insight. Although Taylor sold Fast Company for \$340 million, it hasn't dulled his keen interest in pursuing free-thinking leaders and game-changing companies. He'll share his observations on what fierce businesses with non-stop innovation do that STAFDA members can emulate during his Talent, Culture, and the New World of Work: How to Unleash & Sustain Fierce Execution & Nonstop Innovation presentation.

In addition to Taylor, STAFDA's President, Brian Gersten, On Time Supply, Suffern, NY will present the Distributor State of the Industry along with the President of Aerosmith Fastening Systems, Don Kudlak, sharing the Manufacturer's perspective.

Onward to the Trade Show! STAFDA manufacturers haven't seen the majority of their distributors in nearly two years and exhibitors are showing up in force for Orlando! The exhibit hall is 80% sold as of this writing and the



Orlando Show, in particular, will be full of new products with expert staff to demo them. Social media has been invited to the Orlando meeting for the first time where they can stream, film, and tweet out all the new things they're seeing at the show. STAFDA's Trade Show runs for five hours on Monday, October 25, with another five hours on Tuesday, October 26. A list of exhibitors is updated regularly and posted to STAFDA's website.

College students with industrial distribution, supply chain, or construction management majors will also be on hand. Universities have the travel funds and want their students to experience STAFDA again. The college students participate in all Convention events, including a Speed Interviewing Session where STAFDA attendees have the chance to conduct job interviews. At STAFDA's Nashville 2019 meeting, all 30 college students in attendance had at least one job offer from a member.



Social events are a big component to the STAFDA Convention and the Opening Party at Andretti Karts/Topgolf is a ringer! STAFDA's done a buyout of both venues which share a common parking lot. It'll be arcade games, bowling, and two-levels of kart racing at Andretti Karts and over at Topgolf, retired LPGA superstar, Annika Sorenstam, will be mixing with STAFDA attendees in the hitting bays and posing for photos. STAFDA's Closing Party at the Hyatt Regency Orlando on Tuesday night, October 26, will feature a unique treat and something no one has ever seen before at a STAFDA party! Don't miss it!



Not a member? STAFDA's Orlando Convention & Trade Show is for members only so please visit www.stafda.org to learn more. The three-day event's fee is \$199 per person.



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AN INTRODUCTION TO SPECIALTY SALES REPS by Robert Lopez

Specialty Sales was founded in 1992 by Ira Shushan as a one-man Sales Rep agency. Since then, Specialty sales has grown into a three-man organization spanning

three generations with a combined total of over 100 years experience in the fastener industry.

Ira previously founded and sold West-Specfasteners. Robert Lopezcame on board in 2008. He had also founded and sold his distribution business Titan Hardware. Aaron Shushan (Ira's son) joined the organization in 2015 after achieving a business marketing degree

at Cuesta college. Aaron also worked for his dad at West Spec and a few fastener distributors prior to joining Specialty Sales. The relationships they have built during their careers are the foundation of their success. They pride themselves on the quality of their relationships, their work ethic, and their product knowledge.

Today Specialty Sales is one of the leading

BUSINESS FOCUS ARTICLE

I LUV MY JOB

Manufacturers Representative Organization servicing commercial, industrial, electronic, automotive, construction, structural, and aerospace fastener distributors and



Source and W.J. Roberts. Specialty Sales' distributors prefer reps with expansive product lines and diverse product knowledge, so they can treat them as a one-stopshop.

Specialty Sales' goal is to provide value while insuring a mutually beneficial relationship between their principals and their distributor customers.

SPECIALTY SALES REPS



DAN WALKER THE TIME IS RIGHT TO JOIN IFI TO HELP ADVANCE THE FASTENER INDUSTRY from page 24

As a member of IFI, your company will receive the intelligence from these key resources while cultivating relationships with the leaders of the fastener industry, including peers, customers, suppliers, and other industry experts. IFI is the interface to all aspects of the fastener industry.

Membership provides frequent industry updates regarding business-critical industry issues, including government affairs, economic trends, tariff issues, world steel markets, and more. Members are provided up-to-the-minute technology and standards information, with a chance to review any new fastener manufacturing standard before it is finalized and published.

By joining forces with the leaders of the fastener industry, IFI is able to collectively leverage benefits for its members, including available health insurance, discounted shipping and purchasing, as well as no cost technical training for your staff. The IFI also provides resources for improving company performance through statistics reporting, member surveys and collaboration on key issues of common concern such as worker safety.

IFI provides members with the latest news about events, issues and trends impacting the industry. It is because of these services, IFI is the leading association representing the interests of the manufacturers of mechanical fasteners and formed parts, and the key suppliers to the industry. IFI members collectively shape the future of the industry.

IFI has the history and experience, representing the interests of North American mechanical fastener manufacturers since 1931. Today the IFI represents more than 180 fastener manufacturers and suppliers in North America—making it the authoritative source of fastener industry information.

The members of IFI are a collection of small, medium and large manufacturers, ranging from single-site, familyowned businesses to multi-location, publicly traded fastener manufacturers. IFI represents approximately 85 percent of the production capacity in North America.

Individual companies range in size from around \$10 million in sales to companies over \$1 billion in sales. To be eligible for consideration, a company's principal business must be the manufacture of fasteners in North America.

As mentioned above, IFI has a robust government affairs program. IFI retains the services of a Washington, DC-based lobbying firm to ensure members are kept informed on legislative and regulatory actions that may impact our industry, and to represent IFI before the Administration and Congress. By being a member of IFI, companies can help shape industry positions on key legislative and regulatory matters that may impact the fastener industry.

The organization also produces key industry resources, like the 2021 edition of the IFI Book of Fastener Standards. The book is a collection of 96 standard specifications issued by ASTM, ASME, SAE and the IFI itself. IFI also offers an online version of the standards that monitors and provides the latest editions of the ever changing standards. Along with the IFI Technology Connection, IFI provides key resources and the most advanced digital tools for you to access the latest industry standards and data.

The IFI is the key industry resource for the changing nature of the fastener industry. As the infrastructure bill and other key measures are being debated, now is the time to add your company's voice to the leaders of the fastener industry.

Dan Walker is Managing Director of the Industrial Fasteners Institute, headquartered in Independence, OH, an industry trade association founded in 1931 serving over 180 member companies nationwide.

Companies interested in IFI membership should contact IFI at (216) 241-1482, email dwalker@indfast.org or visit them online at www.indfast.org.

distributor news

The Gilchrist Foundation has awarded two scholarships from the 2021 applicants. Congratulations to the recipients. We wish them well and are pleased to assist them with their education.

They are as follows and their sponsoring companies;

Emily Hayman EMCO Engineered, Plainfield, IL

Anna Katelyn Pittman ASP&M, Calera, AL

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 Gilchrist Foundation invites any person wanting to further their education to apply for the scholarships. Applicants can be full time or part time students working in the industry or children of working fastener people. The Foundation has awarded 72 scholarships since its beginning!

For additional information visit the foundation website at www.gilchristfoundation.com.

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- Silicon Bronze 651



distributor news

The New England Fastener Distributors Association, (NEFDA) will be hosting a Basic Print Reading Class on October 28th taught by Jim Speck. The class will feature basic print reading info including: how to read a print, the different types of prints, understanding what needs to be on prints (the details make the difference), understanding tolerances and specifications, and more.

for it's 2021 Calendar:

a October 28th - Virtual Basic Print Reading Class visit them online at www.nefda.com.

NEW ENGLAND FASTENER DISTRIBUTORS ASSOCIATION

¤ December 8th - Holiday Party

For more information, contact NEFDA at PO Box In addtion, NEFDA announces upcoming events 151, Lake Zurich, IL 60047. Tel: 847-370-9022, Fax: 847-516-6728, Email: nancy@nefda.com or

GUY AVELLON WHAT FASTENER DISTRIBUTORS NEED TO KNOW ABOUT ASSEMBLY TOOLS from page 26

A 3/4" air impact wrench will produce 1,000 lb-ft of torque at 6,200 RPM with 750 BPM. On the smaller side, the 3/8" air ratchet will produce 65 lb-ft of torque.

The disadvantages of pneumatic power wrenches is that there are no torque controls on the more common and less expensive models. The output is inaccurate and can change while using.

The air supply for these power tools comes from a generator which compresses air into a storage tank. The air is held at a certain pressure, usually around 115-120 pounds-per-square-inch (psi). When the air tool demands power, the compressor tank delivers the air at the stored pressure. The pressure will naturally drop while being used to a pre-determined amount, usually around 90 psi, at which point the compressor starts up again to regenerate the pressure to 120 psi.

It should be noted that tightening several fasteners at this time will result in unequal assembly torques. If another air tool or lift is operated at the same time, the pressure drops more rapidly and the torque disparity is even greater. Larger shops will probably employ the industrial heavy duty two-stage compressor that will keep more of a constant pressure than the common single stage shop compressor.

Torque Wrenches

Torque wrenches are available in two categories: manual and torque angle. The manual wrench is the most common and is available in many styles: the basic style has a moveable arm against a scale, some have an adjustable spring that is calibrated to dial in a torque value to where the wrench produces a 'click' when the value has been reached, some have a dial gauge that measures and marks on and off-torque which can be read after torquing and another that is electronic which translates data into a control module for error-proofing.

Most are low in cost, portable and can get into tight areas. The accuracy will range from \pm 2-20% depending on model and cost. Calibration on the click-type will be lost if dropped, others may be damaged beyond normal repair.

All manual wrenches depend upon the operator and installation variables. The wrench will always 'see' 100% of the torque. It does not detect variations of friction. The operator can go fast or slow or vary the speed between bolts. The operator may switch from torquing the nut to torquing the bolt head. All of these have a direct response

to accuracy and clamp load.

All torque values are to be used as a guide only. Most are determined of clean and dry threads or 'as received'. The only accurate use of any manual torque wrench is when the bolt threads are lubricated with a known lubricant.

Torque is a function of friction. Friction can come from debris, burrs, etc. A lubricant will overcome most types of assembly friction encountered and produce consistent clamp loads.

All engine torque values cited in repair manuals are considered 'wet' torques, yet the head bolts, connecting rod bolts, etc. don't loosen because the clamp loads are all equal and consistent using the oil as a lubricant. Products like C5A, Moly-Lube, etc. will accomplish the same type of consistency and is very accurate. Just be sure the proper lower torque values are used for the type of lubricant used.

Torque Angle Wrench

This type of wrench is connected to a data processor which measures the torque applied to the rotational angle that the nut or bolt has turned. This is a most accurate tool used for solid and stiff joints. In most cases the turn will negate friction variables, which is why a pre-torque is first applied. However, in some cases it will not always mean that the preload has been achieved. This depends upon how the data is monitored. If the torque and angle have been achieved within a certain per cent window, then the joint is good.

However, if the angle goes significantly beyond the expected tolerance to achieve the proper torque, this means the joint was not solid and there was interference between the joint, such as a burr or non-conforming part. If the torque becomes high and the angle was not reached, then this could mean debris in the threads, cross threading or something else that needs to be investigated. If none of these anomalies are noticed and the operator just inputs on torque alone, then there are problems later.

Conclusion

The bottom line is, when there becomes a rash of failures on a certain product line, without any other complaints, always ask how it was installed and what tools were used. The majority of times it is operator and equipment error.



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FASTENER FAIR USA REGISTRATION IS NOW OPEN FOR FASTENER FAIR USA 2021 from page 28



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COMPUTER INSIGHTS INC. DELIVERING THE GOODS from page 32

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JOE DYSART DOUBLING-DOWN ON RANSOMWARE PROTECTION: KEY SOFTWARE FOR FASTENER DISTRIBUTORS from page 34

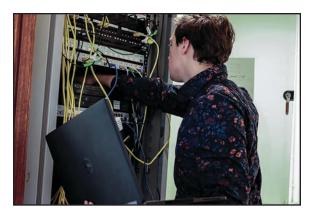
We will continue to target the entire ransomware ecosystem to disrupt and deter these attacks. Today's announcements also demonstrate the value of early notification to law enforcement; we thank Colonial Pipeline for quickly notifying the FBI when they learned that they were targeted by DarkSide."

Even so, hackers more often than not get away with their exploits, extorting hundreds of thousands of businesses across the globe each year – and disrupting

the day-to-day operations of each.

Overall, 37% of organizations across the globe have experienced some sort of ransomware attack between May 2020 – April 2021, according to a study from cybersecurity firm Sophos, "The State of Ransomware 2021"

(www.sophos.com/



37% OF ORGANIZATIONS ACROSS THE GLOBE HAVE EXPERIENCED SOME SORT OF RANSOMWARE ATTACK OF LATE

attack on a mid-size business – taking into account downtime, lost wages, device cost, network cost, lost sales and ransomware paid was \$US 185 million.

Plus, hackers have increasingly exploited a new wrinkle in their ransomware schemes during the past year, threatening – and often making good on threats – to publish sensitive data found in company files on the Dark Web if a victim company refused to pay a ransom.

One only wonders how a fastener distributor could

recover from a hack that laid bare all of that fastener's business on the Web for all to see.

Fortunately, the guys in the white hats have been busy strengthening software designed to thwart ransomware attacks. Here's a representative sampling of that software for fastener distributors to check-out, all

en-us/medialibrary/pdfs/whitepaper/sophos-state-ofransomware-2021-wp.pdf?cmp=120469).

Based on that survey of 5,400 IT managers at midsized organizations across 30 countries, the study also found that the average ransom paid to recover data from a ransomware attack was \$US 170,404.00.

It's the kind of hit that could severely hurt some fastener distributors – and put others completely out of business.

Not surprisingly, many of the criminals behind those successful ransomware attacks kissed-off promises to restore files once ransoms were paid, according to the study.

Specifically, on average, victimized organizations in the study that paid ransoms only got back 65% of their data. And only 8% of organizations forking over money to hackers were able to retrieve all of their files, according to the Sophos study.

Equally vexing for the victim organizations was the cost to day-to-day business. On average, the average cost to restore the impact of a successful ransomware

highly rated and all available at entry level prices.

Essentially, your computer security personnel can try-out these programs at extremely low rates, and in some cases, opt to bring-in an enterprise-level alternative to the same program should he/she deem it necessary:

Bitdefender Antivirus Plus (www.bitdefender.
 com), starts @\$23.99/year: A player in the antiransomware space for a number of years now, Bitdefender
 Plus offers many of layers of anti-ransomware protection
 – along with a myriad of other security features.

The software is designed to eliminate known ransomware on-the-spot. Plus, it will also watch for unexpected behaviors on your PC or network that indicate ransomware activity – such as a sudden, wholesale change in the names of files or the extension names of files.

In a phrase, Bitdefender backs-up all your files at the first whiff of what it determines may be a ransomware attacking beginning to deploy – and then restores the files after the attack has been fully neutralized.

THE DISTRIBUTOR'S LINK 💽 119

distributor news

Semblex Corporation has announced the following key management promotions, effective immediately:

Eric Breidenbaugh, has been promoted to Vice President of Quality and Engineering.

Since 2019, Mr. Breidenbaugh had been Director of Engineering. Over his 23-year tenure at Semblex, he also served in a variety of operational



and engineering management roles. Mr. Breidenbaugh has a mechanical engineering degree from Purdue University.

Mark Wozniak, who had been Engineering Manager at Semblex, has been promoted to Director of Engineering and Technical Services, succeeding the previous Mr. Eric Breidenbaugh in this role. Mr. Mark Wozniak has served in several



engineering management positions since he came to the company in 1996. Mr. Wozniak also has a mechanical engineering degree from Purdue.

Semblex Corporation, established in 1968, is a premier supplier of innovative cold-formed product solutions to the world's leading manufacturers that look to significantly reduce their assembly-related costs, or are challenged to find the best way to fasten new materials emerging in their industries. Semblex provides customers with the latest fastening technologies, along with precision cold-formed and machined components, and special assemblies.

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LAURENCE CLAUS "ANYONE? ANYONE?" - HAS YOUR TEAM DECIDED TO TAKE THE DAY OFF FROM TRAINING? from page 36

Trained team members, both new and old, make fewer errors which translates into fewer quality spills with customers, better made parts or run processes, and less time engaged in non-value added activity of doing something a second time because it wasn't done right the first time.

[2] Increases engagement - In the movie segment from Ferris Bueller's Day Off mentioned at the beginning of this article, we see a textbook example of a group of disengaged individuals. They are accomplishing nothing. We clearly recognize that team members exhibiting such dullness of mind and spirit are not producing at their highest potential. A recent study revealed that upwards of 66% of an ordinary company's employees are either "not engaged" or "actively disengaged". Other studies show that training refocuses those employees and reengages them into the business.

[3] Improved retention - Although these last two years of living in a pandemic have raised many challenges for employers, one of the biggest current challenges is the inability to hire new employees for open positions. The problem is even worse if the job requires skills. Therefore, the folks in Human Resources have likely encouraged managers and executives to protect key positions as best as possible.

Training is a proven means of improving employee retention. When organizations make an effort to train individuals it sends a strong message that the organization is invested in them. This usually makes them feel like they are adding value or that their role is an important part in the success of the business. This particular benefit of training may be especially advantageous when working with Millennials and IGENs, who studies find are more successfully retained when actively trained. This probably stems from the high value that these generational cohorts place on wanting to feel that they are playing a role in the success of the business.

[4] Improves Profitability - If training is successful in improving productivity, increasing engagement, and improving retention, the results are clear that such activity will improve the bottom line. We could probably sum it up by concluding that "effective training is good for business."

What Is The Best Way To Train?

What is the best way to train your team? Which method is going to be most effective? Simply put, there is no right or wrong answer here. In fact, most organizations are going to employ more than one method, perhaps all five, in their training plans. The trick is to understand which is the best for a specific individual or group of individuals on your team and then execute that style of training with them.

[1] Classroom or Instructor Led - This is the traditional classroom model with an instructor facilitating the training in a classroom setting. This is effective for many types of training and individuals that are to be trained. I conduct a lot of this style of training and concluded that generally it works well with almost all audiences, but only as long as the needs of the specific group are taken into account. For example, I do this style of training with machine operators. It is usually quite successful but only as long as I keep it to two hours or less. These folks are up and moving all day, it becomes almost a treat to get to sit for a little while. However, if that period stretches too long, these folks begin to get antsy and discontent.

[2] Interactive Methods - This includes learning activities like case studies, group discussions, quizzes, and role playing. These methods can be quite powerful because they are designed to stimulate interaction and groups working together. These are also the methods that many in the newer generational cohorts were raised with and, thus, comfortable modes of learning. Interactive methods usually stimulate discussion and deeper thinking. They are particularly good methods when you want an individual or group to think through a topic deeply.

[3] Hands-on - Hands-on is also commonly known as "on-the-job" training. It is especially effective for roles that follow a pretty established routine. This one is commonly employed in the fastener industry with shop and warehouse roles. In some cases, jobs can be pretty well picked up quickly and in others, such as some of the skilled fastener manufacturing jobs, can take several years of intensive on-the-job training. Although a very powerful training method, it is not without its limitations including limited trainers and utilizing individuals that may be skilled but not good at training.

[4] **Computer Based Training** - Computer based training involves utilizing a computer to run a training program. These usually are structured as a tutorial with a quiz or test at the end. Computer based training introduces an aspect of flexibility not provided by the prior three options as it usually allows the student to participate when and where they want. Often the training can be stopped and restarted to accommodate interruptions or other priorities.

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ICS FLANGE THINGS TO BE THANKFUL FOR from page 40

Secondly, a big thanks to all our customers. You have been extremely patient with ICS Flange. You had grown accustomed to next day shipments and most of the time, same day shipments. At one point, we were almost at 80 hours to get an order out the door. This was frustrating and we spent a lot of time saying "no" to our customers when they asked to have their orders shipped the same day. I am now glad to say that we are almost back to normal with shipping out orders.

ICS Flange has been using our vast inventory to help with the demands of our customers during this rapid increase in sales. For years, the amount of inventory in our pallet racks overwhelmed me, but this year, without it, we would not have been able to meet our customers needs. What I once viewed as a bad thing turned out to be a saving grace. Usually when you called, we had what you were looking for or we had it coming in shortly. Today, ICS Flange has never had so much material waiting to be brought in from our overseas suppliers and without a way to get it here. Even when we can get space on the ships, what had originally taken 4 weeks to be at our dock is now taking 12-14 weeks. As you are aware, the supply chain issues are mind boggling and the costs we are being charged to bring in containers is criminal.

Thankfully, most of our customers have been very understanding with the price increases the industry has been experiencing. We cannot keep up with how quickly costs are rising. I had always been a big proponent of blanket purchase orders as it gives our customers and ICS Flange the ability to plan and anticipate the supply chain. Currently, we are not able to do this. Hopefully, pricing will be back to normal at some point, and we will all get back our sanity.

Lastly, both our domestic and over-seas suppliers have been wonderful to work with during this time. They have supported our needs and when possible, they tried to get us out of difficult situations by getting product to our warehouse as soon as feasible. Even our secondary operation suppliers worked with us on delivery schedules to meet the demands of the industry.

Without quality products in house, shipments would not be possible. The relationships we have with our suppliers are long and meaningful. This is on purpose.



Like a best friend, when the world gets crazy, they are there to help you get through your problems and help support your growing pains.

I have learned a lot through this experience, and if you are reading this, I know you have grown too. The question is what will we do differently in the future? What will the new normal look like? Everything in the world is held together with fasteners and ICS Flange is one company that helps hold the world together.

The most important aspect of our company, and all our companies, is the people employed in them. Take time to celebrate the people that fasten our world and companies together. Be safe, be kind and be happy! I am not sure when life will slow down enough to get some sanity back, but when it does, I have some new drinks that I would love to share with you, my treat!



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ALL-PRO FASTENERS FASTENING vs WELDING: FABRICATING BETTER JOINTS from page 44

Welding inspection methods can vary depending on the project. Visual inspection is the most common method, carried out before, during, and after welding. Other, more expensive inspection methods may utilize specialized equipment under the operation of American Welding Society (AWS) certified inspectors.

While individual welds can be inconsistent in strength along a joint, proper inspection of welded materials (via visual inspection, x-ray, or other methods) can ensure that components are properly jointed.

PROS OF WELDED JOINTS

welding produces a permanent, physical connection between metals. In doing so, it delivers high levels of strength and structural performance.

welding eliminates the need to perforate materials, as is the case with some methods of fastening. This characteristic can contribute to the structural integrity of welded installations.

welding is often the preferred method in many applications, due to contractor familiarity, work crew experience, tension and load characteristics, and other considerations.

CONS OF WELDED JOINTS

¤ Welded joints are more rigid than fastened joints.

 Welds are more susceptible than mechanical fasteners to fatigue.

 Welds are much harder to remove, replace, or repair than fasteners.

 Welding comes with more task-specific safety risks on the job site.

The inspection process has a higher degree of cost and difficulty than that of fastened joints.

Welding is more expensive than fastened joints, in most cases.

 Welding relies on specialized and certified labor, affecting availability, scheduling, and cost.

compared to mechanical fasteners, welds are more difficult and expensive to repair in the field.

Fastening Overview

Fasteners can be used to create temporary or permanent joints. The ability to create temporary joints allows fasteners to be adjusted, removed, replaced, and/or repaired at any point in the future, without



damage to the underlying fastened components.

Fastened joints use a variety of fasteners to hold structural elements in place at a specific position. These joints can incorporate the use of plates or angles, allowing the deflection of these elements to add structural flexibility during load transfer. Importantly, fastened joints allow more movement with less structural stress when compared to welded joints. Fasteners can be used in the creation of tension joints, shear joints, or bending joints.

Installed at equal distances, with equal torque and clamp, fasteners provide an equal amount of strength at each joint, without significant variance. This characteristic makes them an ideal choice from the standpoint of consistent weight loading and distribution.

The cost of fastened and welded joints varies by project, but fastened joints are typically less expensive than welded joints.

The inspection process for fastened joints is relatively straightforward and does not require specialized equipment. Inspectors must ensure that bolts have been tensioned, verifying that fastener stick-out is "positive" or "zero" (i.e., no threads are ending inside the nut), and in the case of some lockbolts, check that ends have been properly snapped off.

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JIM TRUESDELL WORKER SHORTAGE AND SUPPLY CHAIN PROBLEMS PLAGUE POST-COVID ECONOMY from page 46

Lacking any basic workplace skills, these people are the ones who "ghost" job interviews, don't show up for the first day, or walk off the job after a few hours exposure. Finally, there are those who are truly revaluating the meaning of work.

This can manifest itself as seeking a job which they really love, or to those who see no inherent life affirming qualities of the "work ethic" and who are rejecting traditional thinking about work as one of life's missions. They don't see employment as part of the apparent obligation for everyone to contribute to society. Evident inequalities of society may mean a rise in bitterness or class envy which gives rise to feelings of being "used" as a cog in someone else's economic machine.

A surprising survey reported in the Wall Street Journal found that, of the people seeking jobs, over 50 percent are looking for a position where they can work remotely. People may have worked from home for the past year and a half and are not willing to give up the freedom from direct supervision and the time flexibility which they gained. Returning to in person work seems to them to be putting shackles back on. Unfortunately, most of the available jobs require an in person presence so it may be necessary for these people to change their perspectives.

An interesting comment made by the CEO of Morgan Stanley, James Gorman, when his company faced some resistance from remote staffers who were called back to the office was "If you want a New York City salary, you have to be in the five boroughs to earn it." Jamie Dimon of J.P. Morgan Chase said "We are getting some blowback about coming back internally, but that's life."

Businesses seeking to fill those difficult positions can respond with a number of strategies:

[1] Reevaluate wage scales to take the market into account. The difficulty here, however, is that it is unfair to offer higher starting wages than are paid to existing employees. It may mean that entire wage structures must change— which means pricing will inevitably rise and impact market share if competitors do not do likewise. This, however, may be necessary to maintain service levels.

[2] Consider more automation to reduce manual labor needs.

[3] Be open to diversity and people who may not necessarily fit the profile of your typical worker. Older workers or disabled workers may provide steady candidates who are looking for secure employment.

[4] Be able to explain and monetize the true value of your benefits in order to appeal to those who may just be considering the hourly wage

[5] Utilize overtime for existing workers to keep up service levels.

[6] Work on improving the quality of life and flexibility of the jobs in your present work environment. Can jobs be reconstituted as a hybrid of remote and in-person? Especially focus on retention of existing workers.

[7] Some companies are adjusting hours of business operation to meet worker demand without sacrificing customer service.

[8] Consider flexibility and possibly assistance for parents with childcare needs

[9] Consider referral bonuses for current workers who suggest a friend who becomes an employee.

[10] Consider more paid time off, especially in the first year when workers normally have little vacation. Quality of life/balance seems to be of increasing importance.

Hiring managers are finding staffing to be a wholly different world these days. Given the changing demographics of the country (with Boomers aging out of the work force and Millennials moving up to leadership positions) these changes are likely to be permanent. Hopefully these are positive changes and not an abandonment of the work ethic which has always made this country an economic leader. If indeed large segments of the populace are losing that innate drive to work then we are going to see more inequality rather than less in our society. The ambitious hard working people will separate themselves from the rest and will reap the financial benefits. The risk is that stronger class divisions will lead to pressure for wealth redistribution that will further reduce incentives to work and get ahead. We all have a stake in preventing this from happening. \bigcirc



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MWFA FSTNR WEEK - AUGUST 16TH-20TH, HOSTED BY MWFA - DELIVERS from page 50

But the Week didn't end there! On Thursday, the MWFA hosted a MWFA Mixer invited industry personnel and friends to join them at Real Time Sports in Elk Grove, IL. The event featured complimentary appetizers, pizzas, cocktails and raffle prizes. For many, it was the parting event until the industry is fortunate again to hold another event in person.

FSTNR Week was an amazing event. Thank you to everyone who participating for making it and industry success. A huge thank you to all the FSTNR Week Sponsors.

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- ¤ Rick Rudolph & Assoc.
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- ¤ World Washer

Upcoming Events

October 12	Fall Golf Outing		
	White Pines, Bensonville, IL		
November 4	Scholarship Awards and		
	Board of Directors Elections		
December 9	Holiday Party		
- · · ·			

Check www.mwfa.net for more dates and details

MWFA Welcomes New Members

Aramid Technologies, *Gilbert, AZ* Atlas Distribution Services, LTD, *Winona, MN* Goebel Fasteners, Inc., *Houston, TX*

MID-WEST FASTENER ASSOCIATION 75th ANNIVERSARY DINNER ELK GROVE VILLAGE, IL - AUGUST 17, 2021

















































CONTINUED ON PAGE 147

ROBERT FOOTLIK WHAT'S CHANGED IN THE WAREHOUSE POST PANDEMIC? from page 48

Try to approach affected individuals with your concerns privately and tell them specifically what you have noticed. Often the changes have been subtle from their perspective and you can point them to counseling and resources that will alleviate their situation. Work with them to stabilize their lives before it affects everyone around them. Now more than ever a kind word, a sincere compliment or even a smile can do wonders to relieve stress and facilitate reentry into a new normalcy.

If your company already has counseling programs in place make sure that these resources are readily available and used by those in need. Determine what services are in place, what these counselors can (and cannot) do and how they will be operating. Take the time to meet with the HR staff and partner with them to learn more about how to spot telltale signs of drug problems and mental health in your context. They may also educate you to effectively direct workers to the supports that are available. As operation managers or executives, you and your team are the first responders in this new normal.

Everyone has been under unusual stress for over a year and depression, anxiety and substance abuse are not always obvious. Learn what to look for and how to approach the individuals constructively, calmly and with empathy. You too have experienced some of the same problems. Recognizing this in yourself is an important first step to helping others.

And If That Doesn't Work?

While it is still far less expensive to rehabilitate than it is to hire, the new normal is not going to be acceptable to everyone. Some trusted and loyal employees will inevitably be lost to career and life changes. It will not be easy to fill these voids. Hiring and training replacements will stress both you and the entire organization.

In addition, as the Covid-19 Pandemic eases many Fastener Distributors are thinking about hiring/rehiring personnel to cope with increased workloads. Doing this without due diligence can severely impact a recovering operation. Applicants will now arrive with an entirely new perspective on work and career.

Long before doing a background check consider manipulating and studying the foreground. Is the job description of the past still applicable today? With new operating techniques learned over the past year are there different expectations for how much any individual can accomplish during the workday. There are also questions of whether new hires are willing and able to work overtime.

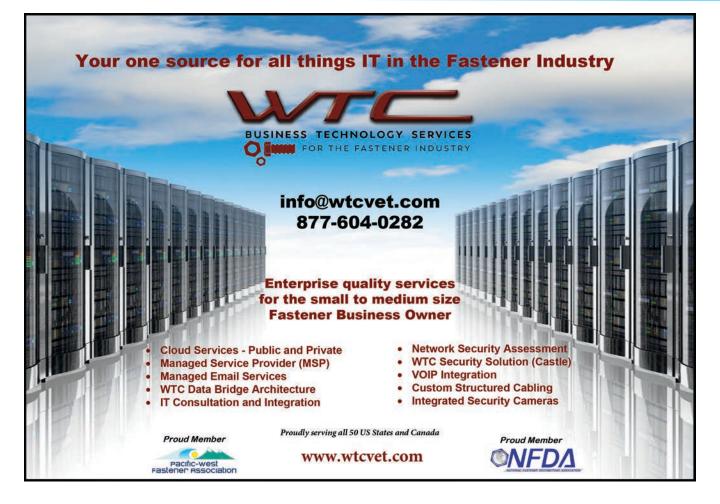
Many companies have also significantly changed the way that they go to market. Additional lines, new products and new Internet customers all dictate bringing on board individuals with the knowledge and skills to implement and optimize your marketing plans. Finding and identifying the right candidates is critical for future success. It may sound obvious, but you can't find new hires without defining the radically changed realities of the workplace. Rewrite and redefine the job description before looking for people to fill the position.

Looking In All The Right Places

Advertising on web sites such as www.monster.com can attract far more candidates than you can possibly evaluate. Alternatively, it could spark zero interest. The key to using web-based resources effectively is to provide the right "filters" when describing the job and requirements. Within reason the tighter your parameters the better the results. For example, instead of asking for "warehouse workers" it makes more sense to add qualifiers including educational requirements, "people skills," career potential, computer literacy, transportation limitations and management expectations. Ideally, the "wrong" individuals will eliminate themselves from your search. Moreover, if the filters are too restrictive the lack of response is important feedback

While there are both State and Federal Civil Rights limitations on what you can say or ask without discriminating it is still possible to establish practical job requirements regarding the realities of the tasks to be performed. If personnel will be required to lift and maneuver 50 pound (23 kg) quarter kegs of fasteners this should be included in the job description, but suggesting any gender preferences for doing the work is forbidden.

An Internet posting can provide the space and format to thoroughly explain the job. Use this to your advantage by posting more information, including pertinent employee rules and regulations, physical requirements and OSHA certifications. All this was true pre-Covid, but the rules and restrictions are changing. Although the realities of the workplace should logically take precedence over societal demands for inclusion, this can no longer be assumed. There are already demands in other industries to modify packaging for greater inclusion. Labor law changes are in process that will effectively create a new workforce and significantly impact your operations.



NATIONAL FASTENER DISTRIBUTORS ASSOCIATION

3020 Old Ranch Parkway #300, Seal Beach CA 90740 TEL 562-799-5509 EMAIL nfda@nfda-fasteners.org WEB www.nfda-fasteners.org

NFDA HAS A NEW LOOK! by Amy Nijjar



NATIONAL FASTENER DISTRIBUTORS ASSOCIATION

NFDA is thrilled to announce the launch of our new logo and website.

The NFDA wanted a more modern look and feel to our logo, as our mission has evolved over time. As the NFDA continues to help our members thrive in the global marketplace, we also understand our target market is a diverse group in age and industry experience. Our rebrand keeps the historical roots of NFDA and offers connections with the next generation.

"We are very excited to launch this new logo, which connects people, groups, and organizations and fosters networking relationships within our industry with diverse backgrounds coming together as one, representing teamwork," said Jodie Thinnes, NFDA Marketing Committee Chair.

The NFDA Marketing Committee has worked tirelessly this past year to bring this to fruition. Big thanks to Jennifer Ruetz, Warren Brooks, Mallory Cravens-Nichols, Craig Penland, Jodie Thinnes, and Kirk Zehnder.

Visit www.nfda-fastener.org to see the new look and find out what we're so excited about!

ASSOCIATION ARTICLE

MANUFACTURING

Our Products

We meet the highest standards—our own.

Our screw products include Machine, Tapping, Thread Forming, Thread Cutting, and Type "U" Drives. Also, Solid Rivets, Metrics, Certified MS, AN, NAS; Self-Clinching Studs, Broaching Studs, Crescent Beta & Beta Pro Self-Threading Fasteners, and Custom Specs or Prints.

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MID-WEST FASTENER ASSOCIATION TABLE TOP SHOW ELK GROVE VILLAGE, IL - AUGUST 17, 2021



ROMAN BASI THE PERSONAL HOME EXCLUSION: ENSURING YOUR HOME SALE ISN'T EXCLUDED FROM THIS TAX BENEFIT from page 52

A sale by an S-Corp or a C-Corp will not qualify because the exclusion is designed to benefit individuals. When the property is held in a trust, the rules get a bit more complicated. Only if the individual is treated as the "owner" of the trust under the IRC will the sale by the trust be eligible for the exclusion.

The IRC provides certain rules of ownership under which grantor trusts and revocable trusts generally are treated as owned by the individual grantor, thus qualifying for the exclusion. If the individual grantor is not considered the "owner" of the trust property under the IRC, such as with an irrevocable trust, then the sale by the trust will not qualify. Third is "residence," considering how you use the property. You must use the home as your residence at least two out of the five years immediately before the sale. For spouses, each individual must meet the residence requirement. Short absences like vacations will not count against your time. Time that the property was used for business or rental purposes will not destroy your ability to claim the exclusion if it is not being used for those purposes at the time of sale, but it can affect your exclusion calculation. Any "business or rental percentage" of your home use for these purposes will be deducted from your exclusion benefits. Fourth is satisfaction of the lookback period. If you sold another home within the two years prior to this sale, and you took a home exclusion on that prior sale, you will fail the lookback period.

If you are selling your home and have any questions regarding the Personal Home Exclusion, please reach out to the professionals at The Center for Financial, Legal and Tax Planning, Inc.



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Smalley's latest retaining ring innovation, the revolutionary Revolox Self-Locking Ring, features a 'dimple and slot' design that safely and efficiently secures your application at high speeds. The top five advantages of Revolox Self-Locking Ring include:

[1] Significantly higher RPM capacity over an equivalent non-locking retaining ring - Revolox Self-Locking Rings were tested and optimized for superior and secure high RPM performance. Contact Smalley Engineers to discuss RPM capabilities in your application.

[2] **Ease of installation** - The sturdy 'dimple and slot' design is not easily damaged during installation.

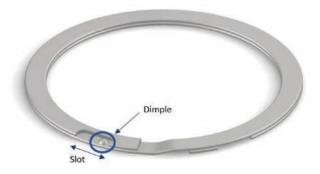
[3] **Lightweight** - With a part weight approximately half the weight of a typical retaining ring, the lower part weight reduces rotating mass and therefore increases efficiency in the application.

[4] Automated installation capabilities -Automated installation capabilities make Revolox Self-Locking Rings an ideal solution for high production volumes.

[5] Inherently better-balanced than snap rings - Revolox Self-Locking Rings have an inherently betterbalanced design that helps decrease vibration.

"We are excited to introduce Revolox Self-Locking Rings to our growing selection of over 6,000 retaining rings," said Ken Massett, Vice President of Sales Engineering. "This new product will transform the way engineers design high rotational capacity applications by enabling them to design around high RPM requirements cost-effectively and with ease of assembly for high volume applications."

As the inventor of the edgewound wave spring and with



REVOLOX SELF-LOCKING RING. THE 'DIMPLE AND SLOT' DESIGN LOCKS IN PLACE AS THE RING ROTATES AT HIGH SPEEDS, PREVENTING RING EXPANSION.



CLOSE UP OF THE 'DIMPLE AND SLOT' DESIGN ON A REVOLOX SELF-LOCKING RING.

over 100 years of manufacturing excellence, Smalley is the Engineer's Choice[®] in providing wave springs, retaining rings, and constant section rings for all of your application needs. Smalley stocks over 10,000 standard parts across 30 configurations and 400 sizes. Prototype or production volume, our team of industry-specialized engineers and No-Tooling-Charges[™] manufacturing process meets the design flexibility your application, budget, and timeline requires. While all of our manufacturing is made in our U.S. based 300,000 ft2 facility, our global network of offices, engineers, and distribution partners allows you to receive parts and support quickly from anywhere in the world.

As an ISO 9001 and ISO 14001 company, we deliver quality products certified to IATF 16949, AS9100, and ISO 13485.

NELSON VALDERRAMA ADAPTING YOUR DISTRIBUTION BUSINESS TO WEATHER THE STORM from page 54

But first thing's first. Let's share some ideas on how to serve current customers.

Communication

If you do not have the "good stuff" to sell yet, the first best option is to manage expectations with your customers by providing visibility and clarity about when you will (or will not) receive goods from manufacturers. Trust is a paramount, so make sure you and your team are being clear, open and honest about timelines, quantities, implications, etc. .

When I ran a distribution business, I asked the sales team to respond to any customer inquiry within 24 hours max; even a note saying "I got your email" is important. You need to make sure that any field that is used in your ERP to state the latest promised date is not only accurate but that your team uses any field available for notes to communicate priorities.

The goal is that if you cannot provide the "good stuff" your customer is waiting for, the next best thing they can have from you is accurate and timely information.

Creativity

Finding ways to make your business work without disappointing customers in these rocky times means being willing to think outside the box. For example, say you only received 25,000 pieces of an item from your supplier despite having 5 customers each expecting 10,000 pieces. It's time to get creative...

Call your customers and explain the situation, ask them what their bare minimum short-term need may be and offer them a discount on something that won't kill your bottom line down the road. Odds are you'll find at least a few customers who are happy to reduce their order in the short run, while still building trust in you for your honesty and flexibility.

Let's take this scenario even further. Say the shortage becomes a recurring issue, you can't keep cutting orders across the board, right? That's where a creative customer segmentation strategy can be a massive win. Use data from your ERP to determine which customers are your core and VIP accounts, which you have to serve, and which ones are drain accounts which can be moved off your books to free up resources.

Remember when I said, "This is the best situation

that could have happened to all of us"? This is what I mean. Something like an efficient, ever-evolving customer segmentation strategy can make or break your business, and now is the time to create one if you don't have one that works. If you don't have the tools in house, feel free to reach out for help.

Innovation

Challenging the standard procedure is the only way many distributors will come out of this pandemic alive, plain and simple. Start with the talent you have, and find ways to uncover more value across the board.

For example, if you happen to have a lot of solution providers (instead of order takers) on your sales team, help them shine by encouraging them to ask your customers the right questions to understand if there are other products you have in stock that can be used for the application/use they have . While this may not work for specialized items, you'll likely find many use cases where it is effective, and the conversations can lead you to much larger, more valuable innovations.

For those skeptical simply look at Tesla, which weathered the chip shortage by rewriting its vehicle software to support alternative chips. CEO Elon Musk listened to the market and recognized that the shortage had upended the auto industry at a time of historic demand for new cars, leading to factory shutdowns, longer wait times, and higher prices.

"We were able to substitute alternative chips, and then write the firmware in a matter of weeks," Musk said. "It's not just a matter of swapping out a chip; you also have to rewrite the software."

Never Let A Good Crisis Go To Waste

I don't know about you, but during my life I had to go through several black swan crises. Early in my career, I thought it was bad luck, bad timing, or something worse. But now that I have more gray hair I try to learn from every crisis.

For example, five years ago I was completely wrong about Amazon Business, their growth, their business model. I was in denial. It took me too long to recognize that if you have companies that, within a matter of a few years, become worth billions of dollars, there must be something really to it, even if it seems to have so many holes on paper. Now with InformMobile!

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NELSON VALDERRAMA ADAPTING YOUR DISTRIBUTION BUSINESS TO WEATHER THE STORM from page 136

The truth is, sometimes it is all about Mindset. In the business model mindset, you need to be able to take a step back; and this sometimes is very difficult for managers because they're so focused. They work in organizations, within certain functions, so they're good at one thing. They're good at strategy, they're good at marketing, etc.

They may work in sales, or they may work in finance. But they rarely have this opportunity to take a step back and rethink the entire infrastructure architecture of the business for which they're working. How does it all hang together? How are all these activities connected to each other?

Wharton's Raphael Amit and Christoph Zott from IESE Business School have discussed this exact concept, and consistently preach the importance of being able to shift the level of analysis from a focus on activities, to the system level.

This system-level innovation also doesn't need to

come just from the top. Democratize system-level ideas and follow the best ones to building a new and better business as a whole. Just ensure that there's a strategic framework in place to help you not get lost along the way.

Grab The Black Swan By The Wings

There's no easy way to put it, the pandemic has been a struggle unlike any most businesses have faced in generations. But therein lies the beauty of this moment we live in. If we could wish it away we certainly would, but since we can't, we as business leaders need to be using this black swan as an opportunity to rediscover our business itself.

Exploring new models, engaging with customers in new ways, investing in segmentation strategies and reinventing yourself to meet market needs is not just a winning combination for startup entrepreneurs, it's a mindset that can help business leaders weather just about any storm they encounter.

138 O THE DISTRIBUTOR'S LINK

ENGINEERED COMPONENTS INNOVATE, DON'T VEGETATE from page 62

As one of the industry's leading fastener distributors, they understand that they must continually work to improve to stay on top. Highly-trained and committed to meeting – and exceeding – their customers' expectations. Their team is driven to work alongside customers to discover their needs and understand their applications.

Engineered Components Company strives to meet the industry's most stringent standards. As an ISO 9001:2015 certified fastener supplier, they have proven their commitment to continual improvement and superior quality. Working to meet or exceed IFI and ASTM standards, ECC performs thorough, in-house quality testing in one of the industry's best quality assurance labs. They ensure that every piece, part, product, and component that leaves their facility satisfies their customers' requirements.

ECC's massive product line is essentially unlimited, and its capabilities are continuously expanding due to its worldwide manufacturing partnerships, in-house and domestic affiliate manufacturing. In addition to many major distributors who carry over twenty proprietary items. In all aspects, ECC is truly unique. They strive to remain unsurpassed in quality, operating their own in-house ISOregistered quality assurance lab and offer an unmatched level of service, competitive pricing, engineering and valueadded, state-of-the-art bagging, and boxing equipment.

Industries Served

I asked Arne to describe his ideal customer. He said they look for open-minded people that are interested in long-term relationships. The more a customer learns about ECC's structure and capabilities; the more opportunities will become apparent. Communication is the key to a successful, lasting partnership.

Some of the industries ECC is serves include:

- ¤ Truck Trailer Production & Aftermarket
- ¤ Truck Body
- ¤ Window & Door
- ¤ Transformer
- a Air Conditioners
- ¤ Automotive Production & Aftermarket
- ¤ Boating
- Plastic & Metal Dispensers
- a Plumbing



- ¤ Grain Bin
- ¤ Housekeeping Carts
- ¤ Gas Pumps
- ^a Construction
- ¤ Gun Safes & Work Benches
- ¤ Bridge Building
- ¤ Security Systems
- ¤ HVAC

Acquisitions

ECC has grown through hard work and acquisitions. Arne shared his thoughts on the subject of acquisitions, "The marketplace and global economy continue to change and automate. Growth potential from cold calling and arranging appointments with purchasing managers is almost non-existent. Smart acquisitions are the best way to grow. Acquire someone in your comfort zone. Minimize risk through due diligence. Results will lead to a more diversified customer base, new product lines to sell to existing customers, and increased purchasing power." I asked what the most significant challenges he faced with their acquisitions were. He told me, "It's always challenging identifying and integrating the best of another company's culture. It is also challenging to come up with accurate inventory analysis from companies acquired. True synergy increases opportunities throughout the company."

- ¤ 2002 Acquired Best Service and Prairie State
- a 2004 Acquired Pyramid Screw Products and Assembly Supply
- ¤ 2005 Acquired Interplex
- ¤ 2009 Acquired Anchor Bolt and Screw



ENGINEERED COMPONENTS INNOVATE, DON'T VEGETATE from page 138

Technology

Arne told me, "Having a reliable software system that does what we need without us having to worry about it is a must. The Business Edge[™] by Computer Insights, Inc. helped streamline our processes, provided VMI simplification, RFID, and more.

Everyone at Computer Insights, Inc. is very responsive and accommodating to our requests for support and new features.

Since the start of the COVID-19 pandemic, we have had to scramble more than usual. Beyond traveling less and being more creative, we needed to accommodate remote workers. Being able to install The Business Edge[™] on remote workstations at no additional cost was helpful."

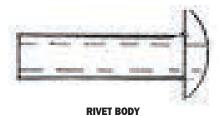
More Information

Engineered Components Company (ECC) can be reached at 1100 Davis Road | Elgin, II 60123. Contact Arne Henriksen, President by telephone at 847-841-7000, email sales@engcomponents.com or visit them online at www.engcomponents.com.

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

ANTHONY Di MAIO SECONDARY MANUFACTURING OPERATIONS FOR BLIND RIVETS from page 64

Blind rivet steel mandrels must be concentric within .008 total indicator reading run out. Bent mandrels will give problems at the assembly of the rivet body and mandrel and will also affect the release of the spent mandrel from the blind rivet setting tool.



Painted blind rivets only have the rivet body painted and the mandrel are not painted. Prior to the assembly of the rivet body and mandrel the rivet body is painted. The rivet body must be free of oil and clean, to have good paint adhesion. The rivet body is washed in a detergent and rinsed with clean water. This operation is usually done in a parts tumbling machine at slow speed. After the rivet bodies are cleaned they are transferred to clean cartons or fiber barrels and sent to the painting department. The paint will have good adhesion when the rivet bodies are cleaned before applying the paint. All alloys of blind rivet bodies are cleaned for painting.

Open-end blind rivets are manufactured in many sizes and alloys and each size and alloy requires a specific alloy mandrel with the correct tensile strength. For this reason the proper storage and label on the mandrel storage container must be correct. The mandrel containers must be sealed containers in order to prevent the mixing of different mandrels. The labels on each mandrel storage container must be correct regarding mandrel indemnification and this label must be securely fixed to the mandrel storage container.

ANTHONY DI MAIO

MID-WEST FASTENER ASSOCIATION 68th ANNUAL GOLF OUTING, WHEELING, IL - AUGUST 18, 2021



CONTINUED ON PAGE 167

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SPIROL THE ADVANTAGES OF SPIROL STANDARD SLOTTED PINS VS ISO 8752 from page 66

Lower Insertion Force

SPIROL Standard Slotted Pins generally require less force to install as compared to ISO 8752 pins. To understand the difference, it is necessary to consider the pin's starting diameter. ISO 8752 pins possess a larger ØOD, and as a result, more force is required to compress the pin during installation. On average, SPIROL Standard Slotted Spring Pins are installed with 40% less force than the equivalent ISO 8752 Slotted Pin.

	ISO	SPIROL STANDARD	% STRONGER	
NOM. DIA.	DC ST	THAN ISO 8752		
1.5	1.58	1.8	14	
2	2.82	3.5	24	
2.5	4.38	5.5	26	
3	6.32	7.8	23	
4	11.24	12.3	9	
5	17.54	19.6	12	
6	26.04	28.5	9	
8	42.76	48.8	14	
10	70.16	79.1	13	
12	104.1	104.1	0	

DOUBLE SHEAR STRENGTH COMPARISON BETWEEN ISO 8752 AND SPIROL STANDARD SLOTTED SPRING PINS

Interlocking

ISO 8752 Slotted Spring Pins are prone to interlocking. The reason for this is that ISO 8752 Slotted Pins have a slot width wider than the thickness of the raw material. Interlocking often causes feeding problems and can result in production downtime.



EXAMPLE OF INTERLOCKED SLOTTED PINS

ISO 8752 Slotted Pins will also interlock during the plating process and these nested pins may end up permanently bonding together. In the event that they become loose again during or after plating, there will be sections of the pin that have little to no plating coverage.

Conversely, SPIROL Standard Slotted Spring Pins have a maximum slot width specification less than the material thickness and thus can not interlock. Therefore, SPIROL Standard Slotted Pins can be automatically fed and installed without risk of downtime due to interlocking, and they can be plated without risk of incomplete plating coverage.

Shear Strength

Another advantage is that SPIROL Standard Slotted Pins provide greater shear strength than ISO 8752 Pins, as show in the chart above.

Conclusion

While SPIROL manufactures both SPIROL Standard and ISO 8752 Slotted Pins, the SPIROL Standard Slotted Pins are superior in every category as it relates to performance and the assembly process. There are no technical benefits with using ISO 8752 Slotted Pins.

Optimize your assembly by designing in SPIROL Standard Slotted Spring Pins!

MID-WEST FASTENER ASSOCIATION MIXER ELK GROVE VILLAGE, IL - AUGUST 19, 2021

























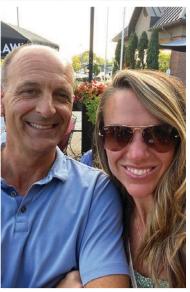












CONTINUED ON PAGE 161

BATCHING SYSTEMS INC. STATE-OF-ART EQUIPMENT FROM BATCHING SYSTEMS from page 68

The Bagmaster® VFFS Bagging Machines are state of the art, high speed bagging systems that make bags out of flat stock film, with the bag formed around the product. They are designed and engineered for use in non-food as well as food applications and use polyethylene and supported clear or pre-printed films. The Bagmaster® C295 Vertical centerfold bagging machine will fill product into the bag being formed through the side of the bag. This produces a bag without a back seal which allows for full panel graphics enhancing market appearance as well as for printing on the front and / or back of the bag. Header and hole punch options make an attractive retail package. The bagger uses centerfold or pre-applied recloseable zipper film and is specifically designed and engineered for heavy duty industrial applications. The Bagmaster® controls architecture has been implemented in accordance with PackML and PackML Tags to provide standardized integration of upstream and downstream equipment. All

of this leads to improved system performance and Overall Equipment Effectiveness for the end-user. They can be integrated to our patented Batchmaster[®] Counters, Weighmaster[®] Weighers, and Kit Packaging Systems or with other OEM brand fillers. Batching, scanning and filling solutions are extremely versatile and can be used on an almost limitless variety of hardware products.

Batching Systems, Inc. (BSI) is a privately owned company based in Prince Frederick, MD and has been operating since June 1, 1989, when our founder Donald Wooldridge decided to start his own company. The goal was simple: Provide a better counter for manufacturing businesses. He began by servicing equipment, and then transitioned to selling equipment integration. Eventually, he developed his own product line starting with a counter that validated product size. BSI has helped to revolutionize the automated packaging and filling industry with its patented state-of-the-art technology.

BATCHING SYSTEMS, INC.







100% North American Made

ABIGAIL LEICHMANN COVID AND PFIZER: WHAT HAS ISRAEL DISCOVERED SO FAR? from page 70

n early July, the Israeli Health Ministry reported a decrease in the effectiveness of the Pfizer vaccine in preventing infections and symptomatic illness, to 64% from a high of 95% reported in May. This is probably a result of the Delta variant entering Israel. A report released July 22 found the percentage of effectiveness against infections and symptomatic illness had dropped to about 40%, perhaps because the vaccinations given in January and February are wearing off over time.

While the early July report found the vaccine 93% effective in preventing serious illness from Covid-19, this number had dropped only to 91% in the late July report. Furthermore, the ministry observed that healthy vaccinated individuals have at least a one-third lower chance of developing severe Covid-19 than do healthy unvaccinated individuals.

¤ Underlining the above findings, analysis of medical records of tens of thousands of members of Israeli HMO Leumit Health Fund suggests that people vaccinated before late February are now twice as likely to experience a breakthrough SARS-CoV-2 infection than are people vaccinated since late February. It is unknown whether this is because most early vaccinators were elderly and/ or had chronic health issues, or because the effect of the Pfizer vaccine may be waning over time.

Rare cases of myocarditis, a heart muscle inflammation, have been seen in men under 25 after receiving the second dose of the Pfizer-BioNTech Covid-19 vaccine, a panel of Israeli researchers reported to the Ministry of Health. Most cases were mild and resolved within a few weeks.

¤ Health Ministry data released in late July indicates that 80% of the vaccinated individuals who experienced breakthrough Covid infections did not infect people with whom they came in contact at public places such as concerts, restaurants, gyms or event halls.

¤ Israeli studies at the start of the vaccination rollout found that immunity from the Pfizer vaccine was strongest 14 days after the first of two doses. People



who got infected after one vaccine dose showed a significantly lower risk of transmitting the virus to others. Furthermore, the first dose boosted immunity even in people who had recovered from Covid-19.

Employees of Sheba Medical Center who received both doses of the Pfizer vaccine were found to have more antibodies against the SARS-CoV-2 virus than did people who'd recovered from Covid-19.

¤ A small study at Tel Aviv Sourasky Medical Center found that nursing mothers who were fully vaccinated produced antibodies in their breastmilk, potentially protecting their babies.

A February study showed that people who received the Pfizer vaccination were significantly less likely to "shed" or transmit virus particles that may be in their nose or throat.

¤ A Sheba Medical Center study published July 28 (after this article was posted) in the New England Journal of Medicine revealed that among 11,453 fully vaccinated healthcare workers in the medical center, 39 breakthrough cases of Covid-19 were detected through RT-PCR testing of 1,497 of the vaccinated workers between January 20 and April 28. In 37 of these cases, the suspected source was an unvaccinated person.

None of the infected workers required hospitalization. However, at six weeks after their diagnosis, 19% reported having long Covid symptoms including a prolonged loss of smell, persistent cough, fatigue, weakness, dyspnea, or myalgia.

MID-WEST FASTENER ASSOCIATION 75th ANNIVERSARY DINNER ELK GROVE VILLAGE, IL - AUGUST 17, 2021

















































CONTINUED ON PAGE 173

LEN LAPORTA FASTENER BUSINESS OWNERS CONSIDER THE OPTIONS TO EXIT OR EXPAND from page 72

Conversely, if their company's value is high, or the owners do not want to make the investments necessary to be competitive, it may be a good time to exit. As a rule of thumb, your own process should begin with a true evaluation of your situation, both business and personal; a discussion with your management team; and a brainstorming session with an investment banker who is experienced in guiding your type of business through strategic alternatives.

Should I Invest And Expand?

Once you have made the decision to invest in the company in order to keep up with demand, the next question is: Can I grow my business organically or do I need to add external assets to keep moving forward? Here are some of the basic strategies:

Partner - Seek a strategic partnership to propel growth with expanded resources and/or capabilities.

Secure Growth Capital - There are several sources of growth capital available. Selecting the right one for your business depends on your situation. Three of the most popular methods are: bank debt via a commercial loan at favorable market rates and terms; mezzanine financing through an unsecured loan that typically commands higher interest rates than a bank loan, but has no principal amortization, providing better liquidity; and equity investment, in which an individual or firm exchanges cash for ownership in your company with the anticipation of sharing in the income and growth.

Acquisition - You should only choose to acquire another company that will be accretive to the value of your business. You can start by developing a checklist of criteria that the acquisition should provide. Some key areas for consideration are adding product lines, distribution channels, capacity, capabilities or geography. Always consider the impact of additional customers.

 a Organic Growth - Create new ways to increase revenue by using your existing resources more effectively.

Am I Better Off Exiting My Business?

There are several options that exist to take money off the table. You can do a recapitalization or "recap" of the business that will reorganize the balance sheet and allow the owner to get money out of the business while maintaining control. You can also sell all or part of the business. There are several types of buyers who have different advantages and attributes that can be considered:

Strategic Buyer - A strategic buyer often pays the highest price and has significant synergistic reasons for executing on a transaction. Your company's capabilities could increase the strategic buyer's scope in ways you may never imagine, substantially increasing their own value and paying you a lucrative multiple. In today's market, foreign strategic buyers are paying above market prices for companies as a way to get into the US market.

Private Equity - There are also a large number of private equity firms who are active within Diversified Industrials. If your transaction is structured correctly, these firms will purchase a portion of your company (some majority, some minority), allow you to take money off the table, stay involved and share in the growth. This is an appropriate hedging strategy for those who are not quite ready to exit and want to hedge their bets.

What Is My Business Worth?

In any of the above scenarios, your investment banker should be able to help you understand the value of your business. Be very careful about the industry rule of thumb: the specifics of your business really impact its value. It's important for you to understand the value that an investor sees in your company. If the purchaser is strategic, then you need to know how your business will impact the value of their business to obtain the highest valuation. Do not assume that an industry average multiple is the right valuation metric for your business.

All in all, acquisitions and divestitures represent great opportunities for fastener businesses to take advantage of the changing market. With sound advice, good planning and a strategic approach, you can review several options to determine which is best for your business.

Selling your own company - or buying someone else's - is not a task you want to take on without the assistance of experts that understand the steps, can navigate the process and bring value to whichever side of the table you end up on. Therefore, we recommend consulting with experienced professionals, including investment bankers, attorneys and accountants who can help guide you through the process. Light Construction Fasteners • Mill Shipments • Fast Quotes • Nationwide Services HIGH QUALITY & SERVICE SETS US APART



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by JOHN WOLZ EDITOR editor@globalfastenernews.com

FASTENERS IN GM EVS LESS THAN INTERNAL COMBUSTION CARS

An average General Motors electric vehicle has about 6.16% fewer fasteners than the traditional internal combustion engine (ICE) ca.

Phil Lienert of GM's advanced technology communications team responded to a Global Fastener News. com inquiry on the difference between the number of fasteners in its EVs versus ICE.

"We compared two similar ICE and EV models and found that the ICE model had about 730 fasteners in its propulsion system with about 685 for the EV," Lienert reported.

"Outside of the propulsion system, we expect that EVs will have a similar number of fasteners to their ICE counterparts," Lienert added.

Traditionally the total number of fasteners in a car

has frequently been rounded off to 2,500. Lienert noted the actual "total number of fasteners varies from vehicle-to-vehicle, but 1,400 is a rough average for the typical GM internal combustion vehicle, not counting pre-assembled components that might contain additional fasteners ."

Lienert noted in his response to GlobalFastenerNews. com that "we don't get many questions about fasteners," and the ICE vs. EV numbers "took us some time to track down."

Some fastener companies note an increase in their content-per-vehicle count.

"The move from internal combustion engines to hybrid and EV platforms ultimately results in a three times increase in content per vehicle (for Engineered Fastening)," stated CEO James Loree in July.

BUSINESS FOCUS ARTICLE

CONTRES OPEN HOUSE - JULY 8, 2021













































distributor news

Goebel Fasteners, Inc. announced recent corporate developments that position the Company for its next phase of significant growth. These developments tie into an expansion of their North American operations and a leadership transition. Following a planned, multi-year transition strategy, it was announced that Christian Reich will be named Chief Executive Officer of Goebel North America, effective September 1st, 2021; Mr. Reich previously served as Vice President of Operations of Goebel Fasteners, Inc.

Marcel Goebel, Goebel Group Owner, stated, "Under Christian's leadership, our North American operation has leaned hard into our transformation. As my direct partner, Christian strengthened the foundational elements of our current vision, mission and core values, and co-architected the strategic brand blueprint to position us toward industry best practices while continuing to immerse himself in our brand. Christian has a strong track record of growing the business, enhancing performance, taking care of employees, and maximizing value. We are excited for Christian and his entire team to continue to build on the success of the Company."

"I am very honored to be taking on this new role with Goebel Fasteners, Inc.", said Mr. Reich. "As Vice President of Operations for North America, I have seen Goebel's relentless commitment to customers, unparalleled quality product offering, and superb team members continue to set the Company apart from the competition.

Marcel Goebel has created a tremendous global footprint that caters to a diverse group of industries and his continuous product innovation has positioned the Company for exponential growth."

As part of the transition, Marcel Goebel added, "This is not a retirement. Goebel is my heart and full-time job. This is an evolution of company leadership that is reflective of how we are operating today. I will continue to lead the Goebel Group & Goebel GmbH, while day-to-day focusing on product innovation, amplifying our brand story and developing our current and future team members. These are the areas where I am at my best and can have the greatest impact moving forward."

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



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ROB LAPOINTE MAGNETIC PARTICLE TESTING VS. PENETRANT TESTING – WHICH TEST IS BEST? from page 100

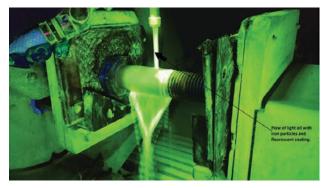


FIGURE 5 - MAGNETIC PARTICLE TESTING SHOWING FLUORESCENT FLUID FLOWING OVER TEST SAMPLE IN A HEAD SHOT ORIENTATION

This is an easy way to visualize the relationship and to understand their directional connection. The magnetic particle test method makes use of this physical relationship. To perform the magnetic particle test, a current is conducted through the test sample (a fastener for our discussion) and a corresponding magnetic field is produced at and just below the surface of the test sample. In Figure 5, the current is traveling through the bolt from right to left so by using the right-hand rule, the magnetic field would be encircling the bolt in a clockwise direction as seen in the photo. This is the same orientation shown diagrammatically in Figure 6. As the magnetic field is created, a light oil filled with iron particles which have been coated with fluorescent material are drizzled over the test sample (Figure 5). If the magnetic field encounters a discontinuity or break in the material, the field jumps out of the material in a small loop above the discontinuity.

This is known as the leakage flux and shown in Figure 6. The iron particles in the oil being drizzled over the test sample interact and are caught within this leakage flux and the fluorescent coating creates a luminous signature along the discontinuity.

Using this method, only discontinuities that have component at a right angle (90°) to the magnetic field are detectable. To catch all possible discontinuities in any direction, the test sample must also be observed by creating a magnetic field that is directed along the part. This is done by placing the part inside a conductive coil which creates a magnetic field in the direction of the long axis of the bolt. The part of the test that detects discontinuities oriented along the long axis of the bolt is called the "Head Shot" and the part that detects discontinuities oriented perpendicular to the long axis of the bolt is called the "Coil Shot." With these two shots together (head and coil), we can detect all possible surface discontinuities in a part. Figure 7 shows a quench crack caused by thermal stress during heat treatment running the length of the bolt and wrapping around the head.

Penetrant testing makes use of an oily fluid that has very low viscosity and surface tension. Viscosity is a measure of a fluid's internal friction which controls the fluid's ability to flow. Fluids with a low viscosity flow very easily. Surface tension is a measure of a fluid's cohesion (stickiness) to itself. Low viscosity combined with low surface tension allow penetrant to flow into very small cracks in the material.

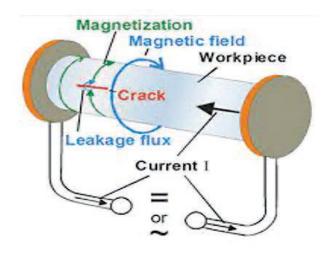


FIGURE 6 - THIS DIAGRAM SHOWS THE COMPONENTS OF THE MAGNETIC PARTICLE TEST THIS TEST ORIENTATION IS CALLED THE HEAD SHOT

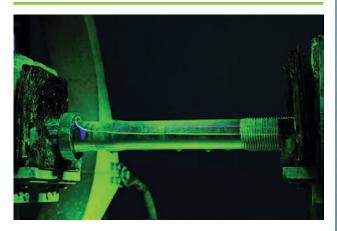


FIGURE 7 - QUENCH CRACK VISIBLE BY FLUORESCENT PARTICLES HELD IN MAGNETIC FIELD LOOP

LARRY BOROWSKI HOT DIPPED GALVANIZED STRUCTURAL BOLTS AND NUTS REQUIRE SPECIAL THREAD GAGE SIZES from page 30

Thread	Bolt		Nut			ASTM
	Max. Pitch	Maximum	Min. Pitch	Max. Pitch	Minimum	Allowance
	Daim. Go	Major Diam.	Diam., Go	Diam., NoGo	Minor Diam.	
1/4-20	0.2324	0.2649	0.2335	0.2384	0.2120	0.016
5/16-18	0.2922	0.3283	0.2934	0.2987	0.2690	0.017
3/8-16	0.3501	0.3907	0.3514	0.3571	0.3240	0.017
7/16-14	0.4059	0.4541	0.4091	0.4152	0.3780	0.018
1/2-13	0.4665	0.5165	0.4680	0.4745	0.4350	0.018
9/16-12	0.5268	0.5809	0.5284	0.5352	0.4920	0.020
5/8-11	0.5844	0.6434	0.5860	0.5932	0.5470	0.020
3/4-10	0.7032	0.7682	0.7050	0.7127	0.6620	0.020
7/8-9	0.8229	0.8951	0.8248	0.8330	0.7770	0.022
1.0-8	0.9408	1.0220	0.9428	0.9516	0.8890	0.024
1 1/8-7	1.0540	1.1468	1.0562	1.0656	0.9940	0.024
1 1/4-7	1.1790	1.2718	1.1812	1.1908	1.1190	0.024
1 3/8-6	1.2913	1.3996	1.2937	1.3041	1.2220	0.027
1 1/2-6	1.4163	1.5246	1.4187	1.4292	1.3470	0.027
1 3/4-5	1.6674	1.7973	1.6701	1.6817	1.5840	0.050
2.0-4.5	1,9028	2.0471	1.9057	1.9181	1.8090	0.050

Coated nuts must be tapped after coating to achieve the

special nut thread sizes indicated above. To be acceptable,

coated nut threads must be within both these maximum and

minimum size limits. For coated structural bolt threads to be

acceptable, they must not exceed the maximum allowable

sizes shown above. Thread inspection is to be performed

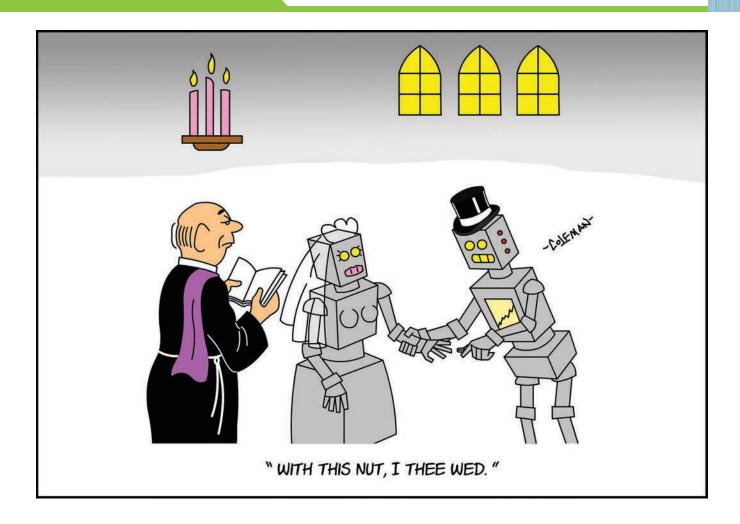
using thread gages made to the sizes in these charts.

When using thread gages to inspect for thread acceptability it is permissible to apply a light machine oil to the thread gages or product to prevent galling and excessive gage wear.

For the product threads to be acceptable the Go thread ring gage must assemble on the bolts, and the nuts must assemble on the threaded Go work plug gage using only hand effort. Because the bolt threads are either 2A or 6g before plating, only the Go

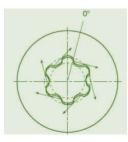
ring is necessary to accept parts after plating. For nuts, because they are over tapped after plating, both Go and Nogo must be used to inspect the product threads. In addition, the author cautions users of these standards to verify the maximum minor on the nut threads as there is potential to lose effective material and reduce the proof load capacity.

LARRY BOROWSKI | GREENSLADE & COMPANY INC



BRUNO MARBACHER DRIVING SYSTEMS FOR FASTENERS – THE VERTICAL WALLED SYSTEMS from page 102

Feature & Concerns:



¤ For Torx Plus, the drive angle is reduced from 15° to 0°. As a result, the torque is transferred more in a turn direction. and virtually eliminates radial stresses which in turn increases driver

bits life.

¤ To take advantage of the Torx Plus geometry one should use the appropriate driver bits.

¤ Torx driver bits can be used for Torx plus drives but not visa-versa.

Autosert



Autosert is not a drive, it's a special feature for Torx and Torx Plus drives, making the driver bit engage with the drive at a higher rpm.

The "compound angle ramp" of the AUTOSERT guides the driver bit into the recess, creating a self-centering and engaging action.

Ideal, for automated, assembly, plus other assemblies where the driver bit is continuously rotating.

Autosert allows for speedier engagement at higher rpms, eliminates slowing down rotation, thus reduces assembly time.

Torx Paralobe

Torx Parlobe is a further improvement over Torx Plus. The following information is based on product literature.

Feature & Concerns:

¤ Torx Paralobe drive system has a greater crosssectional area, versus the Torx and Torx Plus drive systems.

¤ Lobe geometry area is increased approximately 6% over Torx Plus.

Approximately 20% greater drive bit torsional strength and drive systems strength

¤ About 100% greater finite driver bit fatigue life

¤ Oversized recess lobe option reduces effects of recess fill (more play between drive and driver bit)

Other critical features do not apply or are not prominent.

Torx ttap

Torx ttap is a version of Torx that reduces wobbling between the fastener and the tool, it is backward compatible with standard hexalobular tools. The drive has a pilot hole, the key is furnished with pin (tapered stability button), thus stabilizing the tool engagement. Again, this information is based on product literature.

Feature & Concerns:

¤ There is No cam-out, therefor no need to push driver bit into the drive.

¤ This stable drive system makes it possible to have a shallower recess, while still maintaining a stable driving/torquing situation.

Square/Robertson



A Robertson, also known as a square or Scrulox drive, has a square-shaped socket in the screw's head and a square protrusion on the tool. Both the tool and the socket have a slight taper. This

makes it easier to cold head. The taper provides two other advantages, it makes it easier to insert and provides a stick fit characteristic.

Feature & Concerns:

¤ Robertson screws are commonplace in Canada, Robertson fasteners have become popular in woodworking and in general wood construction, etc.

¤ Robertson screwdrivers are easy to use one-handed, because the tapered socket tends to retain the screw. The socket-headed Robertson screws are self-centering, reduce cam-out, they can be removed if painted over or are old and rusty.

¤ A new variation of the Robertson drive is the Nüvo Drive System, in which the screws are compatible with Robertson drive tools, but the screws have rounded lobes that, when used with Nüvo drivers, dramatically reduce wobbling and stripping out.

¤ It has however a poor off angle capability.

Other critical features do not apply or are not prominent.

MID-WEST FASTENER ASSOCIATION MIXER ELK GROVE VILLAGE, IL - AUGUST 19, 2021



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FASTENER FAIR USA REGISTRATION IS NOW OPEN FOR FASTENER FAIR USA 2021 from page 112

Current Exhibitor List Continued...

- ¤ KPF USA (aka Korea Bolt)
- ¤ Leyong Industrial Shanghai Co., Ltd
- ¤ Lindstrom/Stelfast INC
- ¤ Maadhav Automotive Fasteners Pvt., Ltd.
- ¤ Magni
- ¤ Marer SRL
- ¤ Marposs Corporation
- ¤ Michigan Metal Coatings Company
- ¤ Midland Metal Framing and Fastener LLC
- ¤ MOLS Corp.
- ¤ ND Industries, Inc.
- ¤ Ningo Anchor Fasteners Industrial Co., Ltd.
- ¤ Ningbo Qunli Fastener Manufacture co.
- ¤ Ningbo Western Fitting Co., Ltd.
- ¤ Nord-Lock Group
- » Ornit Blind Rivets
- ¤ Perfection Chain Products
- ¤ Pivot Point Inc
- ¤ Prospect Fastener Corporation
- ¤ Reed Machinery
- » Reinhardt GmbH
- ¤ Rie Coatings
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- ¤ Solution Industries LLC
- ¤ Son Fasteners
- ¤ Sond Nuts and Bolts
- » Spring Bolt and Nut Manufacturing
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- ¤ Super Nut Industrial Co. Ltd.
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- ¤ The Auto Bolt Company
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- » Vogelsang Fastener Solutions
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- ¤ Wan luan Enterprise Co., Ltd.
- ¤ Win Fasteners Manufactory (Thailand) Co., Ltd.
- ¤ Würth Industry North America
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- ¤ Yiciscrew Co Ltd
- ¤ Yow Chern Co., Ltd.
- ¤ Zhejiang Saite Machinery Co., Ltd
- ¤ Zhejiang Sanlin Metals Products Co. Ltd.
- ¤ Zonbix Enterprise Co. LTD.

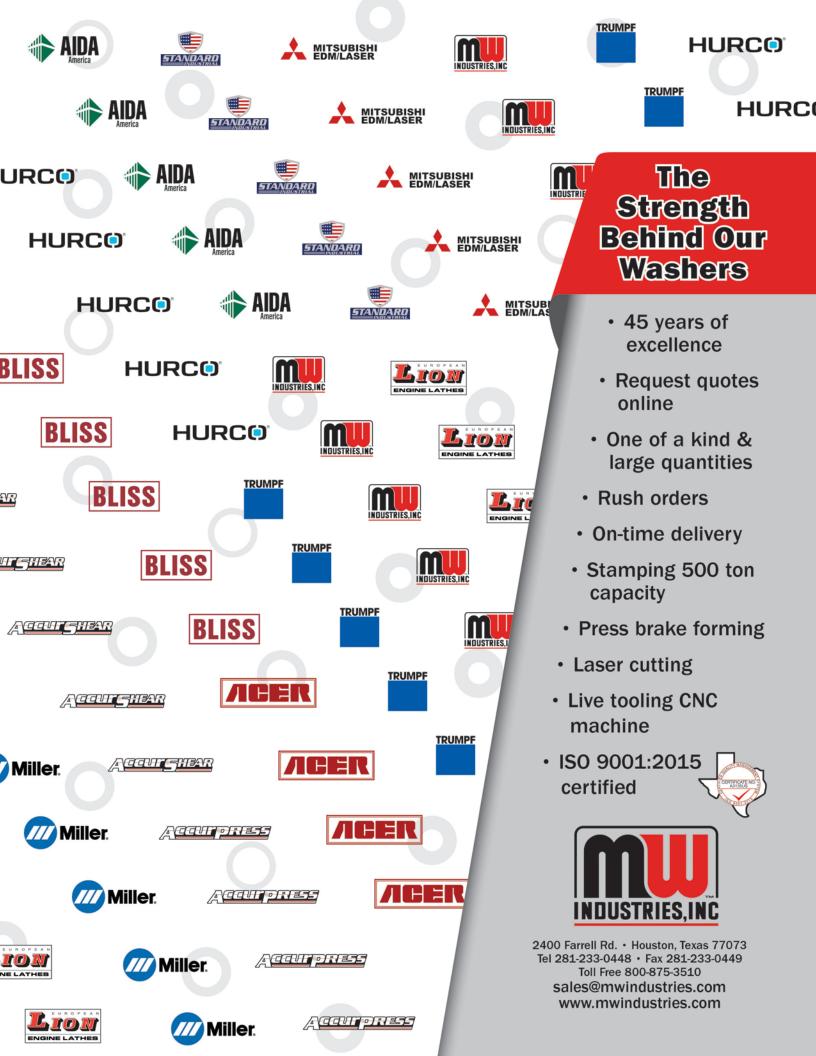
About Fastener Fair USA

Fastener Fair USA is the only exhibition in the U.S. dedicated to the full supply chain – manufacturers, distributors, mechanical and design engineers, purchasers, wholesalers, and OEMs. From automotive to aerospace, construction, MRO to HVAC, furniture to appliances, fastener professionals from every segment of the market find the latest products they need at Fastener Fair USA.

Close to 2,200 fastener professionals participated in Fastener Fair USA 2019 in Detroit, surpassing the 2018 inaugural show in Cleveland. More than 270 exhibitors from 15 countries connected with customers in the aerospace, automotive, civil engineering, construction, energy, machinery, and other industries.

Visit www.FastenerFairUSA.com for the most up-to-date information on Fastener Fair USA and to register today. To learn more about exhibiting, contact Ray Filbert, Sales Manager, at rfilbert@reedexpo.com.





JOE DYSART DOUBLING-DOWN ON RANSOMWARE PROTECTION: KEY SOFTWARE FOR FASTENER DISTRIBUTORS from bage 1/8

¤ ZoneAlarm by Checkpoint (www.zonealarm. com) \$39.95/year: This is another highly rated antiransomware package that erases all vestiges of ransomware on your computer system once detected.

It also embeds 'bait' files on your computer network, designed lure ransomware into changing those files first - setting off alarms and enabling ZoneAlarm to neutralize the attack before it spreads to actual company files.

Plus. ZoneAlarm can repair files after a ransomware attack, if possible.

¤ Kaspersky Security Free Cloud (www. kaspersky.com/free-cloudantivirus), free: It's hard to argue with free. So if you're a fastener distributor looking for instant piece-of-mind today, Kaspersky Security Cloud - Free may be your ticket.

Kaspersky is designed to protect against two types

of ransomware: One, which encrypts your files, making them unusable to you. And two, ransomware that encrypts your entire hard disk, making the entire computing device unusable.

Kaspersky can also neutralize ransomware that locks-up your computer screen. And it offers monitoring and auto-neutralization of typical ransomware behaviors - like wholesale renaming of files and/or file extensions.

Other features include Idle Scan, which monitors resources like system memory when you're not using your computer. And there's a rootkit scan function, which helps betray ransomware activity designed to elude typical monitoring of Windows and typical monitoring used by everyday anti-virus software.

¤ Sophos Home Premium (www.home.sophos.com), starts at \$44.99/year: This program is a lite version of a more robust version of anti-ransomware protection that Sophos offers to enterprise-level businesses.



FORTUNATELY. THE GUYS IN THE WHITE HATS HAVE BEEN **BUSY STRENGTHENING SOFTWARE DESIGNED TO THWART RANSOMWARE ATTACKS**

Sophos is designed to plug known security holes in commonly used software. Plus it offers download reputation analysis on programs that you're thinking of downloading that may have a bad reputation.

Sophos could do the trick for a small business that decides enterprise-level protection is not necessary especially since this lite version enables you to remotely safeguard, monitor and manage the software on up to

ten remote computers.

One caveat: Novice users may face a bit of a learning curve before they can use Sophos' advanced features.

¤ NeuShield Data Sentinel (www.neushield. com/store), starts at \$23.99/ year: Neushield is the only candidate in this pack that does not offer ransomware protection.

Instead, Neushield is an after-the-fact ransomware product, which offers fastener

distributors and other users one-click restoration of files encrypted by ransomware - if possible.

Essentially, Neushield is not a panacea against a ransomware attack. But giving it a whirl after your business has been taken down by ransomware is wellworth the price of entry.

Users install Neushield on their computers before an attack occurs. That enables the software to 'virtualize' any changes to the files on your system. Theoretically, virtualized files cannot be corrupted by a ransomware attack, given that they are not fully operational files in a virtualized state.

Users of Neushield regularly decide when to approve changes in virtualized files - which make those files operational once again.

It's a powerful way to put a buffer on any files in your system that undergo changes - including changes ransomware is seeking to make to your files.

THE DISTRIBUTOR'S LINK 💽 165



NATIONAL FASTENER DISTRIBUTORS ASSOCIATION

3020 Old Ranch Parkway #300, Seal Beach CA 90740 TEL 562-799-5509 EMAIL nfda@nfda-fasteners.org WEB www.nfda-fasteners.org

KEVIN GODIN ELECTED NFDA PRESIDENT FOR 2021-2022 by Amy Nijjar

Kevin Godin of AFC Industries (Fairfield, Ohio) has been elected as the 2021-2022 president of the National

Fastener Distributors Association. Nick Ruetz of AIS (Franksville, Wisconsin) will serve as vice president, Kelly Charles of Sems & Specials (Rockford, Illinois) as associate chair, and Adam Derry of Field (Machesney Park, Illinois) will remain on the Board as immediate past president.

Jim Degnan of S. W. Anderson Company (Downers Grove, Illinois) and Mike Robinson of Vertex Distribution

(Saint Charles, Illinois) have been elected to serve on the Board of Directors effective August 12, 2021.

Continuing on the NFDA Board are Craig Penland of

Eurolink Fastener Supply Service (Greer, South Carolina), Jon Queenin of Specialty Bolt & Screw (Agawam,

> Massachusetts), Marc Somers of Mid-States Bolt & Screw (Flint, Michigan), and Jodie Thinnes of Copper State Bolt & Nut (Phoenix, Arizona).

> Tribute was paid during the meeting to retiring Board members Doug Ruggles of Martin Fastening Solutions (Florence, Alabama) and Bryan Wheeler of Star Stainless Screw Company (Wood Dale, Illinois).

For more information about NFDA, visit www.nfdafastener.org or contact Amy Nijjar, amy@nfda-fastener.org or telephone 562-799-5519.

ASSOCIATION ARTICLE



LAURENCE CLAUS "ANYONE? ANYONE?" - HAS YOUR TEAM DECIDED TO TAKE THE DAY OFF FROM TRAINING? from page 120

The downside to this type of training is that not everyone has access to a computer, is comfortable using a computer, and sometimes the training programs can be glitchy or difficult to use.

[5] E-Learning - An offshoot of computer based learning is E-learning. This can be done on a computer or other type of smart device. Often this format provides the same sort of flexibility of computer based learning since content can be streamed at any time. However, some sessions, especially those that are live, are conducted at a specific time. Webinars and pod casts, however, provide an interesting new option into the training mix that has become very valuable during the COVID pandemic.

How Effective Is Your Training?

Once again, one should not measure their training program by the volume of training being conducted but rather by how successful or effective the training is. Unfortunately this is not an easy thing to do. Take for example, the public school system. For years, states and communities have wrestled to find ways to determine how effective their schools and teachers are. Most have settled on relying solely on standardized testing, which many argue is not a good indicator of teaching effectiveness. It's even more challenging in a business setting, as using testing is not always welcome by participants or practical. Organizations must get creative when figuring out ways to measure effectiveness. The good news is that although it might be difficult, it is not impossible. Take for example safety training that is conducted to address a rash of on-the-job injuries. If monitoring after the training shows that no further injuries occur, there is a pretty good cause and effect relationship to conclude that the training was effective.

I have discovered several things that lead to better training experiences in the classes I conduct. First and perhaps the most important is to maximize engagement. The more engaged participants are the more they retain. Engagement can come from questions, group discussion, or most often individual and group exercises. Secondly, participants have a more effective experience when activities and exercises are designed into the training. Although individuals will learn from a simple PowerPoint presentation, if some hands-on activities that get them up, moving, and thinking creatively are added in, the final outcome is generally much better. Let me wrap up this section with a short story. In January of this year I was doing a multiday training on proper fastening practice to a group of plant maintenance workers. At the end of the first day one of the two general supervisors that was participating came up and asked if it would be ok for them to have fifteen minutes immediately after lunch the following day to do a quick training on a safety related topic. I told them "sure" it would be no problem, after all this was their place of business and team of workers.

The next day at lunch, a couple of the guys came up and swapped laptops with me and waited until our lunch break was over. One of them then got up and conducted the safety training. Now please don't get me wrong, individuals that are not accustomed to being in front of groups get anxious and not everyone is cut out to teach. This individual got up, turned his back to his audience, and read the slides word for word in fast mono-tone diction. Although I suspect the folks in the back of the room couldn't hear their "instructor", they didn't miss out on too much. I'm nearly certain that a number of factors, primary among them the delivery, made this "training" ineffective.

5 Ways To Improve Training Effectiveness

I have been conducting fastener training now for over ten years. I continue to learn better ways to be more effective and always appreciate constructive ideas I get from participants. Following are five that I have learned along the way and believe will result in more effective training.

[1] Involve Leaders - This is as much a suggestion on driving company culture as it is a training effectiveness tool, but I believe that they go hand-in-hand. You cannot underestimate the boost any training gets when "boss" kicks the training off by explaining to participants why the training is important for them and for the company. It really sends a shockwave through the group when that same individual sits down and actually participates in the learning experience. Sadly, in ten years and hundreds of training sessions, I can only recall this happening two or three times. I am convinced that the most "undertrained" individuals in most companies I visit are the top company leaders. Once again this is sad because the message company leaders communicate through their actions is much louder than the words they speak.

MID-WEST FASTENER ASSOCIATION 68th ANNUAL GOLF OUTING, WHEELING, IL - AUGUST 18, 2021















































ALL-PRO FASTENERS FASTENING vs WELDING: FABRICATING BETTER JOINTS from page 124

PROS OF FASTENED JOINTS

¤ Fastened joints allow more movement with less structural stress.

Fastening does not require certified labor or specialized equipment to install.

 Fastening has no specific safety risk, other than working at height.

¤ The price of fastened joints (including hardware and labor) is generally less expensive than welded joints.

a Fastened joints can be easily inspected, adjusted, or replaced when needed.

¤ Fastened joints offer faster installation in the field.

CONS OF FASTENED JOINTS

 Additional fastening hardware is required at the site of installation.

 In some applications, materials must be perforated to accommodate the fastening process.

<u>Project Factors</u>

The decision of whether to use welded joints or fastened joints is best made on the merits of each project. Both options are adaptable for a wide array of applications, and either method can bring unique advantages and disadvantages to a specific job.

Materials

An analysis of the materials to be fastened is one starting point in determining whether a welded or fastened joint type can or should be used. It is important to consider that welding dissimilar metals or pieces of varying sizes can be a challenge. It is also important to note that welding can compromise the strength of



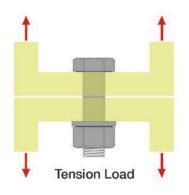
some materials (e.g., aluminum), as a result of the heat-affected zone around the weld. The intense heat generated by welding can make material adjacent to the weld brittle and more prone to breaking. For example, many aluminum welds have microscopic cracks when they cool, as the result of the high shrinkage rate of aluminum.

Surface Coatings

A long with the weldability of materials, attention should be given to potential damage that can be caused to surface coatings during the welding process. In areas adjacent to the weld, coatings can be damaged by the heat generated during welding. If the materials to be jointed feature surface coatings (e.g., for chemical resistance or corrosion protection), it may be best to avoid welding altogether.

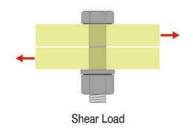
Load, Sheer And Bending Joints

There are several ways loads are applied to fastened joints, leading to the labeling of joints as tension joints, shear joints, or bending joints.



In a tension joint, the fastener serves as a clamp, supporting a load force that is parallel to the fastener's axis. A tension joint's performance and longevity depend in large part on

achieving the correct clamping force. This ensures the bolted connection's ability to maintain preload, in order to avoid joint failure caused by fastening fatigue, stress corrosion cracking, hydrogen embrittlement, or loosening due to vibration.



In a shear joint, load forces are at a right angle to the fastener's axis. In "bearing type" shear joints, joint strength is strictly determined

by the shear strength of the fasteners. In these cases, precise fastener tension is less critical, as long as it maintains the fastener in the assembly. Other shear joints use initial clamp load to resist slip and are sometimes referred to as a friction-type or slip-critical joints. These types of joints are commonly found in the construction industry.

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ROBERT FOOTLIK WHAT'S CHANGED IN THE WAREHOUSE POST PANDEMIC? from page 130

Don't be surprised if an ostensibly overqualified and overeducated applicant responds. A larger philosophical question in the new reality is whether it will be possible to attract and nurture these candidates. An entirely new class of potential employees are people looking for low stress jobs. Physical warehouse work and simplicity in their lives has a new appeal. Stable income, health benefits and a job that "doesn't come home" can support new hobby or business endeavors developed over the last two years.

Balance against this that with the right job structuring new hires can become vital assets to the company as their outside interests change. Cross training, educational tuition support, certifications and a more interesting and rewarding environment can motivate warehouse staff to develop a loyal future with your company. People who are in a state of flux can become the future of the firm.

For managerial positions tap into outside resources that can help establish update job description requirements and prequalify applicants. The advantage of using a professional recruiter is that they can take the search to a wider, yet targeted audience. While this might not be mandatory for a warehouse worker performing repetitive tasks, seeking a more experienced individual is definitely wise when embarking on a major change in marketing or supply chain related procedures. This is especially true in areas such as international commerce, government procurement or any technically advanced field where the new hire will be directing and supervising a group or team.

It is also vital to insure that the posting appears in the right area. If you are recruiting for a logistics position to service South America an individual who is fluent is usually preferred. But, no matter how well they can converse in Spanish this skill is useless in Brazil where the language is Portuguese. Often placing an "ad" in the targeted country or demographic group makes sense, so does insuring that the appropriate audience is reached and this includes factors beyond ethnicity.

Technical products such as fasteners are often best sold (and even handled in the warehouse) by those who have an appreciation for the customers and materials. While most anyone can handle J-bolts, there are idiosyncrasies associated with Mil Standard, aviation or aluminum fasteners that will require a higher level of intelligence and education. Training can overcome ignorance, but only motivation will conquer attitude.

The object is to bring the right individuals to your doorstep, not the maximum number of bodies. With high

unemployment there are plenty of individuals who might fit your needs, but ultimately it comes down to a hand full that are actually qualified...and willing to go back to work. The sooner you make this distinction the lower your recruitment costs and the higher your success rate will soar.

Looking For Candidates In All the Wrong Places

A surprisingly strong case can be made against looking for new hires from within the industry. This might seem counter intuitive, but aircraft pilots do poorly with hang gliders and other aircraft maneuvered with body motion. The reason is that the movements are exactly opposite. In a plane if one turns right the plane follows, while for many "trikes" and "kites" right turns require a left turn motion. In fact, it takes twice as long to transition from airplane mode to "knees in the breeze" flying..

Similarly, candidates who arrive with industry experience also come with excess baggage in the form of what they "used to do" that will take some unlearning and reorientation. There is also the problem of an individual who states that they have "10 years of experience" when in actuality they have one week of experience repeated 520 times. What you need is someone with an open mind and what you may find is an empty shell who burned out at the old job and now "needs some work." This is exactly what can happen when furloughed staff is rehired. They come back to a workplace with outmoded skills and can become frustrated with the new reality.

Seeking candidates externally might also be a bad idea if there are individuals within the organization who distinguished themselves over the last two years. Working from home, covering for absent or laid off staff, learning new skill sets and other factors may have elevated an existing employee to a new level. Why hire to fill the wrong position? It might be far better to bring someone new to a lower level and move the loyal employees to the management team. This can do wonders for morale and incentivize everyone to treat their employment as a career, not just a job.

While the sign above the door is the same, the Covid-19 pandemic scrambled the operation. The changes may be subtle, the faces may look similar, but the more you look nothing is really the same as two years ago. And, you can't go back again.

Identify the opportunities, elevate the loyal staff who have kept the company in business and bring in "catalysts" who can insure a profitable future.



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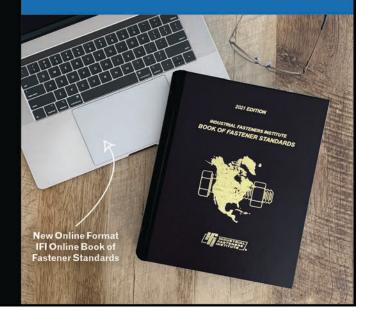
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ROB LAPOINTE MAGNETIC PARTICLE TESTING VS. PENETRANT TESTING – WHICH TEST IS BEST? from page 158

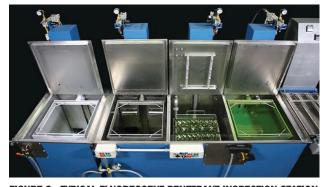


FIGURE 8 - TYPICAL FLUORESCENT PENETRANT INSPECTION STATION

Due to the low surface tension, capillary action pulls the penetrant into small fissures in the material. Capillary action is caused by the fluid being stickier to the walls of the crack that it is to itself. Since the fluid's adhesion to the walls of the crack is greater than the fluid's cohesion to itself, there is a net force that pulls the fluid into the crack even upward against gravity.

After the penetrant is allowed some time to make its way into a crack, it is washed off the outside of the part. The part is then dried, and developer is placed on the part which acts to absorb the penetrant that is still in the cracks. The blotting action of the developer pulls the penetrant out of the crack. The penetrant is absorbed back to the surface and makes the crack visible. To aid in the visibility of the discontinuity, many penetrants contain a fluorescent dye similar to the coating on the iron particles used in the magnetic particle test. Under an ultraviolet light, the dye emits green light making it easily visible in a darkened room. There are several variations of penetrant with some being fluorescent and some designed to be

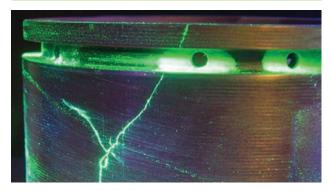


FIGURE 9 - FLUORESCENT PENETRANT SHOWING CRACKS IN A METAL PART

viewed in white light.

Compared to magnetic particle testing, penetrant testing requires much simpler equipment and is a physically a more basic process. Both processes provide the ability to detect surface discontinuities and are highly effective. So, is one process better than the other? If some specifications allow the user to choose one or the other, which one is best?

Magnetic particle testing is limited to being used on material that is not only electrically conductive, but also magnetizable. For a material to be magnetizable it must not only contain magnetizable elements (iron, nickel, or cobalt), but also must have a high magnetic permeability. Magnetic permeability measures the material's ability to become magnetized overall. A material can become magnetized if it contains iron, cobalt, or nickel in sufficient quantities and also if those elements are able to rotate in a way that their internal magnets can align to provide the material with an overall magnetism. An example of a material with high magnetic permeability is carbon steel. If you place carbon steel inside of a magnetic field, the iron atoms can rotate and become oriented in the same direction as the magnetic field. Once the magnetic field is removed, the magnetic domains in the material remain oriented in the same direction and the material will act as a magnetic. A gratifying experiment that demonstrates this phenomenon is to suspend a straightened metal coat hanger by its center and let it hang for a few hours. The coat hanger will rotate to point north-south in Earth's magnetic field. Since the shape of the metal is very linear, the overall object is aligning with its internal magnetic domains which are aligning with Earth's magnetic field.

Another experiment that demonstrates this phenomenon and is essentially the same as the Coil-Shot in magnetic particle testing, is to make an electromagnet out of enameled copper wire, a steel nail, and a battery. In this demonstration the nail becomes magnetized by the magnetic field produced inside the coil and can be used to pick up other ferrous objects (Figure 10).



MID-WEST FASTENER ASSOCIATION 75th ANNIVERSARY DINNER ELK GROVE VILLAGE, IL - AUGUST 17, 2021



CONTINUED ON PAGE 179

BRUNO MARBACHER DRIVING SYSTEMS FOR FASTENERS – THE VERTICAL WALLED SYSTEMS from page 160

Spline Socket (Bristol Spline)

High strength wrenching system used primarily in high torque applications in the automotive and aerospace industries.

Feature & Concerns:

¤ The Bristol comes with four or six splines. The splines are produced to give them a slight undercut to the outer corners of the drive.

n The main advantage to this drive system is that almost all of the turning force is applied at right angles to the fastener, which reduces the possibility of stripping the fastener. They are often used in softer, non-ferrous metals.

¤ The Bristol drives are less likely to strip than a socket drive, however, the Bristol drive is not much more strip-resistant than a Torx drive.

¤ This type of drive is commonly used in avionics, higher-end communications equipment, cameras, air brakes, construction and farm equipment, astronomy equipment, and military equipment.

Other critical features do not apply or are not prominent.

Line Head

The line screw drive is a Japanese system, it looks similar to Torx. The fasteners are commonly called "line head screws". They are also known as "game bit screws", due to their use on some the video game consoles.

Feature & Concerns:

¤ Line head has a high torque capability.

^a There is no cam-out with this drive.

 $\tt m$ It has a poor off angle performance, driver bit needs to be inserted at a 0° angle.

¤ There is limited usage, mostly applied on Japanese products.

Other critical features do not apply or are not prominent.

Polydrive



The Polydrive, also known as RIBE, is spline-shaped with rounded ends in the fastener's head. The tool has six flat teeth, equally spaced; the sizes are

determined by the diameter.

Feature & Concerns:

¤ Polydrive drives resist cam-out.

They are suitable to transmitting high torques, alsoa normal hex key can be used, thus embodying goodversatility.

¤ It is used primarily in the automotive industry in high-torque applications, such as brakes and driveshafts

 used for assemblies of critical parts in very compact engines, particularly for installing heads.

Other critical features do not apply or are not prominent.

Conclusion

Many of the drives we addressed have special features. These features are certainly very useful for certain applications but may not be that useful for others. Before any of these drives are chosen, the application, installation, where the end-product is going be used etc., should be evaluated. Application engineers should carry out application testing, try it out in the intended installation. Based on the results the most suitable drive ought to be selected.

Because some of these special drives are still patented, they may not be readily available. Many of today's devices, appliances are hardly ever serviced so using those special drives is perfectly all right.

However, if equipment that needs periodic service and maintenance in the field, wherever this maybe, those special drives may not be the perfect choice.

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LAURENCE CLAUS "ANYONE? ANYONE?" - HAS YOUR TEAM DECIDED TO TAKE THE DAY OFF FROM TRAINING? from page 166

[2] **Demonstrate** - Train with a goal to get some of the participants equipped to become trainers. In Scouting as the boys advance in the program they are encouraged to adopt ever increasing leadership roles. Scouts teaches them a method known as "EDGE". "EDGE" stands for explain, demonstrate, guide, and enable. The power of demonstration and guiding the participant through practice is extremely powerful.

Let me illustrate this point with a short story. Ironically this is also a scout story. I have spent the last several summers as one of the adults at my boy's week long scout camp. The boys spend the week sleeping on cots in platform tents supplied by the camp. A platform tent sits on a wooden platform about a foot off the ground. This is excellent for keeping the tents clean and dry. However, unlike a normal camping tent, the tent sides just hang over the edge of the platform and do not have sealed seams and zippered openings with insect netting like a camping tent. The bottom line is that mosquitos can easily find their way inside at night. To prevent the nuisance of a buzzing insect around your ear, the boys are encouraged to bring mosquito netting to camp and set it up over their cot.

The methods of protecting oneself have often been creative and complicated. To address this problem, a couple of years ago, a former scout invented a pop-up mosquito net. This is a great device because it is a simple and compact design and is completely set-up and ready to go in about twenty seconds. The problem is folding it back up when you are breaking camp. It is supported by a flexible spring steel band that must be twisted in just the right way to get it stowed in its storage bag. The unit comes with a set of instructions that include pictures, although the boys usually lose this on the first day so they do not have it when it's time to stow it away.

Anyway, although I knew there was a "trick" to getting it folded up, I had forgotten it. As I had anticipated though, as we broke down camp, I had multiple boys seeking my assistance to fold up their netting. As I was twisting and turning and generally not having any success, one of the boys walked up and said let me show you. He proceeded to demonstrate that the trick was to first fold it in half like a taco and then grab it in one specific spot. When you did this, "wah-la", it folded right up. Demonstration followed by practice is far more effective than being introduced to a concept only in a PowerPoint presentation.

[3] Follow-up - I cannot stress enough how important follow-up is. Often times participants are getting a lot of information thrown at them at once. To truly sink in the ideas must be reinforced. There are many ways to do this, but almost all are accomplished by following up.

[4] Make it Fun - For sure there are some topics that you are scratching your head right about now and asking how you could ever make training about them fun. The more you can find ways to have fun, though, the more successful and effective your training will be. I mean how many average high school teachers do you remember? Chances are not many, but I would be willing to bet that you had at least one teacher that was really fun and you remember that individual and their class with no problem. I had a high school math teacher who would occasionally come to calculus class as "Math Man". It was a silly gesture, but fun, and I'm sure helped me learn more effectively than if we had just followed the text book.

[5] Hire a Professional - There are certainly many training topics that can be handled internally. However, there are some that cannot and others that the internal expert either does not have the time to prepare or is not well suited to instruct. In these cases, it is well worth the investment of a professional to come in and conduct the training. This may seem to be more expensive on the front end, but is likely to pay for itself many times over on the backend because the training is simply more effective.

In Summary

Organizations that have a culture that values effective training will very likely be much more successful than those that simply are going through the motions to check a box. The key to any good training is its effectiveness. Organizations that have a culture that values training will intentionally seek ways to improve and measure training effectiveness. In essence they recognize that this is just too important to the long-term health and vitality of their organization to be left to chance.

NCFA 12th ANNUAL DISTRIBUTOR SOCIAL STRONGSVILLE, OH - JULY 8, 2021















































178 O THE DISTRIBUTOR'S LINK

ALL-PRO FASTENERS FASTENING vs WELDING: FABRICATING BETTER JOINTS from page 168

Bending joints are fastened joints that are exposed to a bending force, meaning that the fastened joint is subject to both shear and tension load forces. This combination can have a significant impact on the joint's strength and behavior.



Inspection Requirements

Welding typically requires a more complex inspection process, employing specialized inspection teams and equipment on critical installations. Fasteners are subject to visual and manual inspections, thereby simplifying the inspection process.

Longer term, inspections of fasteners remains easy. Fastened joints require only simple visual inspections to check for corrosion or other weakening factors, without the need for specialized equipment (such as x-ray devices), as is sometimes required for the inspection of aging welds.

Time Savings

The welding process is typically much more time consuming than fastening, particularly when detailed inspections are required. Fasteners, on the other hand, are relatively quick to install, and simpler to inspect, resulting in significant total project time savings in many applications.

Damage From Heat

The welding process generates intense heat that can compromise the strength of some materials (e.g., aluminum), and cause damage to surface coatings in areas adjacent to the weld. In these cases, consideration should be given to the use of fasteners as a mechanically safer alternative. Fasteners have no undesired effect on the strength of fastened materials, or the integrity of surface coatings. Additionally, fasteners can be manufactured with a wide range of coatings to provide uniform protection against corrosion and other environmental forces.



Labor Considerations

Welding requires skilled technicians who are often highly paid and, in some industries and geographical areas, may be difficult to find and retain. Welding also requires the use of specialized equipment, which adds expense on top of labor costs.

Fasteners can be installed by regular craft labor crews using inexpensive equipment such as wrenches, torque wrenches, and drivers. Usually, no training is required to install fasteners, so high-priced skilled labor is not required. The ability to utilize regular crews can lead to significant cost savings and simplified worksite scheduling. The selection of appropriate equipment for modern mechanical fastening should be undertaken in conjunction with the fastener supplier.

Logistics

While welded joints eliminate the use of hardware at the job site, fastened joints do offer advantages when it comes to handling and logistics. All-Pro Fasteners offers a variety of custom manufacturing, inventory management, kitting, and distribution options that ensure the on-time delivery of the right hardware to efficiently support the requirements of any industrial, construction, or infrastructure-related installation.

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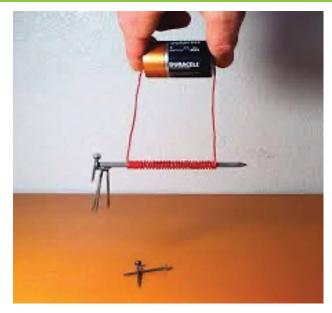


FIGURE 10 - AN ELECTROMAGNET MADE FROM A COPPER WIRE, STEEL NAIL AND A 1.5-VOLT CELL

Another experiment that demonstrates this phenomenon and is essentially the same as the Coil-Shot in magnetic particle testing, is to make an electromagnet out of enameled copper wire, a steel nail, and a battery. In this demonstration the nail becomes magnetized by the magnetic field produced inside the coil and can be used to pick up other ferrous objects (Figure 10).

An example of a material that has sufficient iron to become magnetizable, but low magnetic permeability is stainless steel. 304 stainless has about 75 % iron in it, but the iron is associated with its adjacent atoms in a structure that does not allow the iron to rotate so that its internal magnetism can be aligned with an external magnetic field. 300 stainless steels have low magnetic permeability and therefor do not become strongly magnetized.

Since magnetic particle testing only works on materials that have high magnetic permeability, it is limited to carbon steels. This drastically limits the types of fasteners that can be tested with MT.

Penetrant testing is limited to materials that do not have high porosity. Highly porous materials generally absorb penetrant. When developing the penetrant, the difference between the penetrant being pulled from the material and the penetrant being pulled from the discontinuity are indistinguishable. This renders the test useless. Other than porous material restrictions, penetrant can be used on nearly all solid materials including carbon steel, stainless steel, nickel alloys, copper alloys, aluminum, and polymers. This means that essentially all fastener products can be tested for flaw with penetrant.

Both tests produce visible indications of the type and location of discontinuities, however the brightness of indications produced by penetrant with sensitivity levels of 3 or 4 (on a scale of 0.5 - 4) are noticeably brighter than indications produced by magnetic particle fluid with the typical magnetic particle brightness of 14A. This means it is more likely for a technician to see an indication in a penetrant test than in a magnetic particle test.

Human fatigue is a factor in detection as well as indication brightness. Magnetic particle testing using a wet-bench instrument, which is most common, can be fatiguing process. The technician is often standing on their feet for hours at a time and operating and instrument that produces a load noise when energizing the sample. The technician is also wearing some protective clothing to avoid fluid splashing on their clothes and gloves. In addition, indications may not exhibit brightness for a long period of time. It may fade as the magnetism in the part is reduced over time. Altogether, the fatigue level is significant. This can lead to missing indications and improperly accessing the test sample.

With penetrant testing, there is no noise. There is no machine required to produce an indication. This alone is a stress reducing feature. Additionally, indications are long lived, and samples can be examined for a long period of time if necessary. Protective clothing should be worn during the processing of test samples but can be removed for inspection. Penetrant inspection can also be done while seated if necessary.

While both magnetic particle and penetrant testing can do an equivalent job on carbon steel, PT is more generalized to the variety of materials that are used to produce fasteners. The process of using penetrant is also simpler, less costly, and less fatiguing than magnetic particle. Based on these simple factors, it is convincing that if the choice is yours to make, then penetrant testing is the better one to choose.

For questions omore information, you are welcome to contact me for more information robl@aimtestlab.com or visit www.aimtestlab.com or call 619-396-2046.

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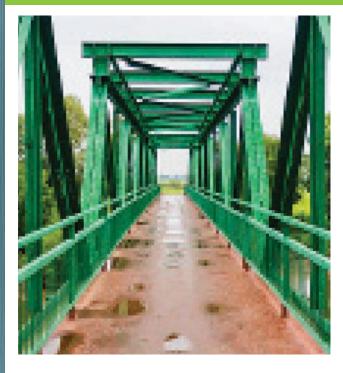






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Environmental Factors

Any application requiring corrosion or chemical resistance, or other protective treatment, requires careful consideration of the suitability of welding or fastened joints. As noted above, the heat generated by the welding process can damage surface coatings, requiring the application of paint or other treatment following the completion of welding. Fasteners cause no damage to coated materials and can be manufactured with specialty coatings and plating to ensure proper corrosion and chemical resistance.

Cost

The cost of fastening is generally cheaper than the cost of welding, taking into account the procurement of fastening hardware as well as installation costs. Hourly rates for welding services and equipment can be high, while labor costs associated with fastening installations can be appreciably lower. If project cost is a critical concern, fastened joints are the best option (other factors notwithstanding).

Safety

Workplace safety is important regardless of the joint type, and welding comes with more task-specific risks. Welding is a hazardous task, and precautions

are necessary to avoid burns, vision damage, inhalation of fumes and gases, UV radiation exposure, and the potential for electric shock. Random sparks generated by the welding process can be a potential fire hazard in certain applications. Spent rods and other by-products of the welding process can contribute to potential safety risks. On the other hand, fastening has no specific risk other than working at height.



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ALL-PRO FASTENERS FASTENING vs WELDING: FABRICATING BETTER JOINTS from page 182



The Lindapter Girder Clamp solution allows contractors to achieve high strength connections in the field without any welding, by quickly clamping two steel sections together and tightening with regular hand tools. The Girder Clamp's adjustability creates additional time savings, as it permits easier alignment of steel sections in the field without the need for temporary tack welding or redrilling. The system is compatible with almost any steel profile including W and S beams, channels, and angles, and is used worldwide on applications across the construction spectrum from industrial to architectural structures.

The Hollo-Bolt[®], another Lindapter product, was launched in 1995 as the first expansion bolt for structural steel approved by ICC-ES for use as a structural connection in all Seismic Design Categories A through F.

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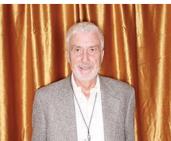


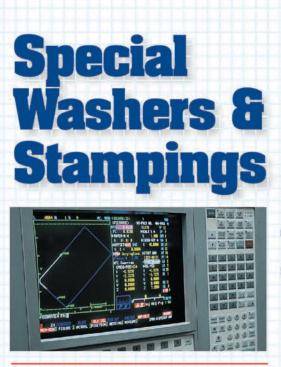












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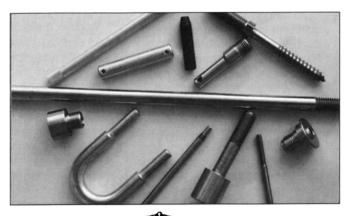
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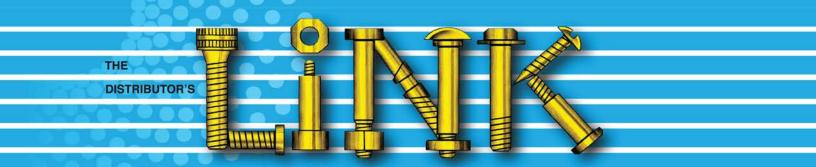
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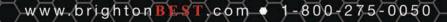
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