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METALCON PREVIEW

OCTOBER/NOVEMBER 2022
Vol. 21 • No. 6

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Advancing the Industry

Welcome to the show issues of Metal Roofing and Rollforming magazines. I am taking a moment of front office privilege and providing one publisher's letter for both magazines. These issues will be available at both METALCON and the Construction Rollforming Show.

We are pleased to announce a partnership with METALCON where together we will collect and disseminate industry data. We are distributing a survey asking questions about business climate in 2022 and what you see happening moving in to 2023.

The hope is that with the data we can recognize new trends and validate anecdotal information to help you successfully navigate the currently challenging business environment.

A summary of the data will be offered in the December issue of Metal Roofing and the February issue of Rollforming. We are also collecting data for the other market segments we cover.

Shield Wall Media offers a sincere thank you to the staff at METALCON. Cooperation serves the industry and makes both of our organizations and the industries we serve stronger.

*Gary Reichert, Publisher
Shield Wall Media*

Over the past 32 years, METALCON has become the most influential metal construction and design event in the world. Every facet of the industry — from contractors, installers, designers, owners and installers, to distributors, suppliers, and manufacturers — gather in one place for 2.5 remarkable, focused days of buying, selling, learning, networking, and collaboration.

That's why we are excited to partner with Shield Wall Media for this important research project. By collecting, evaluating and disseminating valuable industry data, we can all make better-informed business decisions, chart a course towards a more prosperous future, and gain some clarity in an uncertain world.

Thanks to Shield Wall Media and to you, the heart of the metal construction industry. We look forward to your insights.

*Judy Geller, Vice President
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Roof during the replacement process.
Photo courtesy of McElroy Metal.

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Gary Reichert,
Publisher, Shield Wall Media

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Top 10 Reasons to Attend the 2022 Construction Rollforming Show

“An investment in knowledge pays the best interest.” — Benjamin Franklin

By Chris Cox, JD

The 2022 Construction Rollforming Show provides a one-of-a-kind opportunity for business owners and employees to gain knowledge specifically designed for the rollforming industry. The following are the TOP 10 REASONS why business owners, managers, and key team members should attend the 2022 Construction Rollforming Show in New Orleans on October 26-27.

1 Gain knowledge of industry trends and forecasts. Trade show attendees learn from experts and peers about what is happening in their industry and what is expected to happen in the next 12-24 months.

2 Gain knowledge of legal, regulatory, and compliance changes. What new laws and regulations have been implemented over the past year? How will these changes affect your business and what steps can businesses take to succeed?

3 Gain knowledge of new products and services. Manufacturers like ASC Machine Tools are constantly developing new products and features that help their customers improve productivity and efficiency. Trade show attendees learn about the latest products and features that can give them a competitive advantage.

4 Gain knowledge of how other businesses operate. Trade show attendees meet their colleagues and discuss how their businesses operate and what challenges they are facing. By doing so, attendees learn how other businesses



improved efficiency and solved problems. Attendees can use this information to improve their own efficiency and solve problems.

5 Gain knowledge about your competition. The rollforming industry is constantly changing. Attendees can learn what their competition is doing. Who bought new equipment? Who opened a new location? Who went out of business?

6 Build relationships with key vendors. Vendors can be valuable partners. Trade show attendees get face to face time with multiple key vendors and establish relationships that will help their business succeed.

7 Build relationships with colleagues in the industry. Getting to know colleagues in the rollforming industry is a great reason to attend a trade show. Attendees can meet their colleagues from other regions and have a resource to “bounce ideas off of” in the future. For example, if a business owner is considering investing in new equipment, that owner can contact another business owner she met at a trade show to get input on the pros and cons of specific types of equipment.

8 Build relationships with your team. Many businesses send their key employees to trade shows. This is a great opportunity for key team members to get involved in the industry, learn about new products and practices, and meet key vendors. It also provides an opportunity for key team members to feel like an important part of the business and to build relationships with other team members away from the office.

9 Changes in latitude, changes in attitude. Trade shows provide a great reason to get out of the office for a day or two (or more). When an owner or manager is in the office, the majority of his or her time is spent dealing with immediate issues and “putting out fires.” Trade shows provide an opportunity to step away from those daily fires and think about big picture goals and strategic plans for the business.

10 Visit Historic New Orleans. New Orleans is a dynamic city with fantastic architecture, dining, music, and fun! Tripadvisor’s Travelers’ Choice named New Orleans as the #3 Top Destination for city lovers in 2022, and the Construction Rollforming Show is a great opportunity to explore this fantastic destination.

Trade shows provide a unique opportunity to gain targeted industry knowledge and to meet colleagues in the Rollforming industry. I look forward to seeing you in Booth 511 on October 26-27 at the Construction Rollforming Show in New Orleans! **RF**

Chris Cox is the Southeast Regional Sales Manager, ASC Machine Tools, Inc.
MR

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Construction Rollforming Show

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If you roll form or use benders or brakes to form panels, channel, studding, soffits, gutters, carport or other metal construction components, the Construction Rollforming Show is a must-attend event. The educational programming and exhibitors are tailored specifically to companies that roll form or metal form for the construction industry.

The Third Annual Construction Rollforming Show will be held at the Ernest N. Morial Convention Center in New Orleans, October 26-27, 2022. The Show is 100% dedicated to construction roll forming, making it the place to learn about

best practices, the equipment and materials that will help make your roll forming business a success.

Unlike previous years, all of this year's show passes are all-access: educational programming and exhibit hall entry are all included with the \$50 pre-registered admission. (Admission is \$75 at the door.)

Families are welcome; children under 14 are admitted free with an adult.

Visit www.constructionrollformingshow.com for details as they develop. **MR**

New Orleans has lifted its mandate requiring proof of vaccine or negative COVID test to enter certain businesses. Individuals are not required to wear a mask or face covering with the exception of healthcare facilities and long-term care settings, as specified in Federal guidelines.

Event Venue:

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Wednesday, October 26, 2022*		
8:00-8:45	Metal-to-Metal Fasteners	Underlayments
9:00-9:45	Coil Coating Basics	Benefits of Design Software
10:00-10:45	Bending Trim and Flashing	Polycarbonate Panels
11:00-11:45	Condensation Protection	Sales Process
12:00-12:45	Coil Irregularities	Ventilation and Ridge Vents
12:30	Exhibit Hall Opens	
1:00-1:45	In Demo Area: Carport Roll Forming Lines	
2:00-2:45	Sealants	Standing Seam Clamps
3:00-3:45	Using Pro Tips On as a Sales Aid	Software to Improve Quality
4:00-4:45	Fasteners: Metal to Wood	Coil Gauges and Specifications
4:30	Happy Hour Starts	
5:30	Exhibit Hall Closes	
6:00	Happy Hour Ends	

Thursday, October 27, 2022*		
8:30	Exhibit Hall Opens	
9:00-9:45	Snow Retention Types and Applications	Roll Former Maintenance
10:00-10:45	In Demo Area: Portable Roll Formers	
11:00-11:45	Software for Efficiency	Closing a Sale
12:00-12:45	Shearing Contest	
12:30	Exhibit Hall Closes	

*Educational schedule subject to change

Power Tool Institute Cautions Against Non-OEM Batteries

“The quality will remain long after the price is forgotten.” That’s a well-known quote from Henry Royce, co-founder of luxury car brand Rolls-Royce. It’s usually taken to mean that quality is worth paying for. But there’s another meaning: buying on price alone often ends with the disappointment of poor performance. It is this second meaning that drives the Power Tool Institute to strongly caution tool buyers to only buy batteries manufactured by their tool’s original equipment manufacturer (OEM).

When it comes to buying power tool batteries, going cheap can have potentially disastrous consequences for contractors and business owners. The costs related to a single fire caused by a counterfeit or knock-off battery will quickly reveal the lower initial purchase price to be no bargain at all. Fires and injuries cost much more than buying quality OEM batteries. Spending a little more up front for a product that will perform well and for a longer period of time is a smart investment.

What makes OEM batteries the right investment over counterfeits and knock-offs? Each OEM has its own proprietary control circuitry for the total system, which encompasses the tool, battery, and charger. This is so the three components communicate properly. There are numerous design considerations manufacturers address in the construction of their batteries: type and quality of cells, durability of electrical connections, electronic controls (in the battery, charger, and tool), protective housing, compliance with standards and third-party certification, etc.

This circuitry design is not available to third-party component suppliers. And the differences between the inner workings of these power tool systems make it virtually impossible for any other battery to match the OEM, no matter what the package claims.

For all these safety and compliance considerations, batteries are not cross-compatible (unless specified by the power tool manufacturer). When buying after-market batteries for power tools, it is

important to consult with the power tool owner’s manual and purchase only the batteries recommended by the manufacturer.

Before purchasing a non-OEM battery, contractors and businesses are advised to consider all factors, not just price. And what seems to work well out of the

box may deliver dire consequences later. Purchasing a battery from an unknown seller without having any verification of the seller’s qualifications or experience — or of the battery’s construction or testing or certification — can leave you with an unsatisfying, and potentially dangerous, experience. **MR**



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Metal Roofing Magazine was born as a supplement to *Rural Builder* magazine in 1999. A few more supplements were published in 2000. In 2001 it was elevated to a stand-alone magazine, and today it is over 20 years old.

This article was originally published in the September 2001 edition of *Metal Roofing Magazine*. The information is as relevant today as it was two decades ago.

If you would like to see specific topics revisited, contact Karen Knapstein, karen@shieldwallmedia.com.

Select the Right Finish

Part I: Metallic Coatings

By Derek A. Hodgins, PE, RBEC, CCA

Originally published *Metal Roofing Magazine*, September 2001

With so many finish options available for metal roof panels, choosing the right one can be difficult. This article is intended to guide the reader through the selection process by providing basic information on the most popular finishes. Part I is devoted to metallic coatings on steel base sheets; paint systems, coating systems, and unpainted metals will be covered in later articles.

Metals such as copper, zinc, stainless steel, and aluminum form hard and self-regenerative oxide barriers that protect them from rapid corrosion in most circumstances. Although ideal for exposed applications such as roofing, these metals are more expensive and lack the strength of carbon steel. Carbon steel also forms an oxide — rust — but it is soft and permeable, and does not offer guard against further corrosion. For this reason, carbon steel must be protected.

Numerous metallic coatings have been used to protect iron or steel sheets for roofing. Tin and terne, a lead-tin alloy-were common in the 19th century but had to be painted to be effective, as does the modern zinc-tin replacement for terne. Galvanized or zinc-coated steel has been used effectively for more than 160 years. More recently, Galvalume® and similar coatings have joined pure zinc as effective and affordable coatings for steel.

Metal coatings protect the base metal by providing a sacrificial metal (galvanic protection) and/or by creating a physical barrier (barrier protection). A metallic coating may also be painted to provide further protection or to add color to a building. However,

unpainted metallic finishes have also gained popularity on steep-slope applications, where the roof provides an architecturally pleasing feature.

Galvanic Protection

Galvanic protection refers to the process by which the base metal acts as the cathode and a sacrificial metal serves as the anode. In the presence of an electrolyte (water), the less noble metal (anode) will be compromised, leaving the more noble metal (cathode) intact¹. The intensity of this process is proportional to how far apart the two metals are on the galvanic series (often referred to as the

Galvanic Series

Magnesium

Zinc

Cadmium

Aluminum 2017

Steel (plain)

Cast Iron

Lead

Tin

Brasses

Copper

Bronzes

Titanium

Monel

Nickel (passive)

304 stainless (passive)

316 stainless (passive)

Silver

Graphite

Anodic/
Active

Cathodic/
Noble

galvanic scale). This series is the simplest way to illustrate the relative electrode potentials of various metals. Zinc is the most common anode due to its relative position on the galvanic series.

A simplified version of the galvanic series is provided (below left) for reference. Roofing contractors are well advised to be familiar with the galvanic series, so as not to introduce conditions that will result in galvanic corrosion.

The galvanic series shown includes an approximate grouping of metals based on their anodic and cathodic potential. Again, the farther apart two metals are in the galvanic series, the higher the potential for galvanic corrosion. Roofing contractors should try to use components fabricated from the same metal. If this is not an option, the dissimilar metals should be as

close together on the galvanic series as possible. As a last resort, metals with a moderate or significant potential for corrosion should be physically separated by an inert material (i.e. nylon washers or a rubber membrane).

Sacrificial Coatings

The most common sacrificial coating is the galvanized finish, which offers galvanic protection to the noble, cathodic steel by providing a sacrificial anode in the form of zinc. When corrosion occurs, it is the zinc that is compromised, while the steel remains intact. Galvanized finishes are easily identified by the coarseness of their appearance, referred to as spangle.

In general, the thicker the coating, the longer the protection. For all practical purposes, this relationship can be con-

sidered as linear¹. Depending on the zinc thickness and the severity of the environmental exposure, galvanized roof panels can begin to rust in as little as 10 to 15 years. For this reason, unpainted galvanized panels have typically been discouraged. However, the application of newly developed coatings can greatly enhance the long-term performance of galvanized roof panels, making them a more viable option.

Galvanized coatings have the advantage of being self-healing: The exposed steel will attract zinc from the adjacent coating, healing nicks and providing excellent protection at cut edges and drilled holes. Additionally, galvanized panels are typically less expensive when compared to other protective metal finishes.

The disadvantage of galvanic



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protection is that the sacrificial metal must always be present. If the sacrificial metal is used up, the base metal will begin to corrode. Additionally, zinc coatings are not resistant to acids and alkalis, and should always be topcoated in chemically aggressive environments.

The minimum zinc coating weights for galvanized steel are designated by ASTM in Specification A924 (formerly A525). Coating weights for galvanized sheets vary, but for roofing applications are typically G90 or 0.90 ounces of zinc per square foot, total both sides. The coating is about 0.76 mils thick per side.

Barrier Coatings

Barriers protect the base metal from corrosion by keeping it free from moisture and oxygen. Paint is the most common barrier. Metal barrier coatings consist of metals such as lead or aluminum that have high resistance to corrosion. While effective, barriers must be maintained. Once a barrier is compromised by weathering, scratches, abrasions, or chemical reactions, the base metal will be vulnerable to corrosion.

Aluminum is the most common metal barrier coating for architectural steel. Aluminized steel was introduced in the 1930s, but was not used in roofing applications until 1954. The application of commercially pure aluminum to steel sheet is a process that was developed by Armco Steel Inc.¹ The aluminum coating provides a barrier to the underlying steel base metal. While two types of aluminized steel are available (Type I and Type II), roofing applications are limited to Type II. When exposed to weather, the aluminum coating will form aluminum oxide. Unlike zinc oxide, aluminum oxide is not soluble. For this reason, the durability of aluminized steel is not proportional to the thickness of the aluminum coating.

The minimum aluminum coating weights for aluminized steel are designated by ASTM in Specification A924 (formerly A463). Coating weights for aluminized steel roofing applications



Differing spangles of Galvalume (left) and galvanized (right). PHOTOS BY DEREK A. HODGIN.

are typically 0.65 ounces of aluminum per square foot (designated as T2-65) total both sides. The coating is about 1.1 mils thick per side. This coating carries a limited 20-year warranty against panel perforation due to normal atmospheric corrosion. However, 20-year exposure testing has shown that in most environments it will far outlive and possibly even double the warranted life.

Aluminized steel can be used in painted or unpainted conditions. Its use in roofing has been limited, in part due to the difficulty of protecting cut or drilled edges from corrosion.

Combination Sacrificial/Barrier Coatings

The most common combination coating used in roofing is Galvalume® (marketed as Zincoalume® in some areas). Introduced nearly 30 years ago, this zinc-aluminum coating provides both galvanic and barrier protection. The zinc (approximately 45 percent by weight) provides the sacrificial protection, and the aluminum (55 percent by weight) provides the barrier protection. This hybrid finish has become extremely popular for low-slope (less than 3:12) roof applications as well as architectural applications where a “bare-metal” look is desired. In 1995, it was reported that over 5 billion sq. ft. of Galvalume roofing panels had been installed since its introduction³. Due to the combination

of protection mechanisms, this finish has the ability to provide a longer service life than a galvanized finish in the same exposure. Current marketing literature suggests a service life of 30 years or more in most environments, without major maintenance.

The minimum coating weights for Galvalume are designated by ASTM in Specification A792. Coating weights for Galvalume roofing applications are typically 0.55 ounces per square foot, total both sides. The coating is about 0.9 mils thick per side.

Basic Considerations

Visibility. The first consideration in choosing a metal coating is whether the roof will be visible from the ground. Designers typically refer to roofs as low-slope or architectural. Low-slope roofs typically cover large one-story commercial buildings and are not visible from the ground. Architectural roofs have steeper slopes (typically 3:12 or more) and are visible from the ground.

Many buildings include both types of roofs. A typical example of this is the modern shopping center (strip mall), which typically consists of a pre-engineered metal building with a low-slope roof. The front and side elevations are often clad with brick or stucco with a steep-slope roof or mansard extending from the front elevation to cover a walkway. Regardless of the application

visibility will often determine the type of finish you should consider.

Visibility also relates directly to the roof's ability to drain: The steeper the slope, the less the metal roofing is exposed to water. For this reason, steeper slope roof panels can be expected to retain their finish longer. As the slope decreases, careful consideration should be given to proper waterproofing details and the durability of the selected finish.

Adverse conditions. Exposure to harmful environments or conditions should also be a top consideration. A few examples²:

1. Contact with strong acids should be avoided. When using aluminum or aluminum alloy, strong alkalis can be detrimental. For this reason, exposure to wet cementitious mortars should be avoided. If necessary, an acrylic coating can sometimes be used to protect the metallic coating from mortar. Highly alkaline cleanser, sometimes used to clean HVAC equipment, should be avoided on roofs with metallic coatings.

2. Zinc and aluminum are both anolytic metals and should be isolated from electrolytic contact with more noble (cathodic) metals such as lead and copper. Flashing should be constructed from the same metal as the roof covering whenever possible.

3. Runoff from copper will act as an electrolyte and cause rapid galvanic corrosion of a metallic coating. Rooftop equipment that includes copper lines that will drip onto the roof should be avoided.

4. Although coastal applications are common, exposure to salt should be limited due to corrosion. For this reason, metallic coatings in coastal environments can be expected to have a somewhat shorter service life. Some manufacturers of metal roof panels will limit or not offer a warranty for projects located at the coast. If a warranty is considered important, this is a topic that should be addressed early in the planning stages of a project.

5. Aluminum and aluminum coatings are sensitive to graphite. In a wet climate,

a heavy graphite pencil mark can corrode metallic coatings containing aluminum in as little as two to three years. The process will take slightly longer in drier climates.

Conclusions

Metallic coatings of many varieties have demonstrated years of successful performance on a wide variety of applications. Advances in technology have resulted in a wide selection of metallic coating options for building owners, architects, and roofing contractors. Each successful project should include a conscientious effort to match to the metal roofing components with the desired appearance and function of the building. However, as with most construction projects, proper material selection and attention to detail remain key to long term performance. **MR**

References

¹ *Architectural and Low Slope Metal Roofing Systems*, Roofing Industry Educational Inst. (RIEI), Feb. 1999.

² Robert M. Haddock, "Metal Roofing From A (Aluminum) To Z (Zinc)," *RSI Magazine*, Sept. 1992.

³ Galvalume Sheet Producers of North America, *Galvalume Standing Seam Roofs: 20+ Years of Proven Performance*, June 1995.

Galvalume® is a trademark of BIEC International Inc.

Derek A. Hodgin has 30 years of experience as an engineering consultant and is responsible for facility condition inspections, failure analysis, damage assessments, and forensic engineering investigations of all types of structures. His experience includes failure analysis of a wide variety of building enclosures and roof systems. He has investigated and testified regarding the performance of various building products including fire retardant treated (FRT) wood, exterior insulation and finish systems (EIFS), hardboard siding and trim. Derek has also designed, permitted and investigated failures of civil and coastal projects such as residential and commercial developments, marinas, docks, shoreline stabilization and retaining systems, basin and channel dredging. A large part of his projects have included analysis of deficient construction cases including roofs, exterior walls, windows, doors, structural framing, civil site work and building code review. He has investigated and testified regarding various types of personal injury cases including slip/trip and fall, railing failures, swing collapse and ladder accidents. Derek has performed engineering assessments of hurricane, tornado, hail, wind, ice and fire-related damages for a wide variety of commercial and residential structures in the United States and Caribbean.



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Make Estimating Easy!

By Linda Schmid

Estimates are a necessary part of the job for roofers, but they take time, can put workers' safety at risk, are subject to human error, not to mention that travel and a ladder may be required. Considering that there is no guarantee that you will get the job, minimizing the time and trouble involved in this aspect of the work is likely a top priority, which is why so many roofers have turned to imagery. The basic offerings are: satellite, drone, and aerial imagery.

Tony Agresta, General Manager of North America at Nearmap said that aerial imagery is popular with roofers because it gives them instant access, it's dependable, economical, current, and they like that they can look at roofs over time.

The way it works at Nearmap is that the contractor pays for an annual license based on the amount of area they cover and their stated needs, usually measurement and remote surveillance, which makes it affordable even for small companies. Once licensed, they go online and the information they need is at their fingertips. They can enter an address, and inspect and measure the roof. They also have access to the historical mapping of the roofs in the area over the last seven years to monitor changes over time.

A roofer can even tell what type of material a roof is composed of and have them color-coded. The Photo Realistic application shows every detail including venting, piping, and more.

Aerial imagery is very efficient compared to physical surveys or drones because you don't have to pay to have the survey done over and over in order to get an updated map or to see degradation of a roof over time; you just log into your account. If you were using drone imaging, you would have to send up the drone, download the imagery, process it, and upload it online.

Nearmap started out in Australia in 2007 with the idea that they wanted to build their own high resolution camera system. They accomplished this goal; Agresta says that their aerial imagery is in the 5-6 $\frac{1}{2}$ cm range, approximately 3-4 times higher resolution than satellite. Early next year they will come out with their Hyper Camera 3(HC3) which will be at about 2 $\frac{1}{2}$ cm for 6-7 times higher resolution.

Cameras are mounted in planes that fly at 14,000 feet and take millions of photos. They include vertical shots, top down, or oblique, sidewise which allows you to measure height, and angles, achieved through their patented mirroring shots. A patented device levels out the imagery should the plane dip or experience turbulence.



As time goes on and technology is updated, cameras are capable of capturing imagery in larger and larger areas with one pass making flights more efficient.

Flights are made in spring and fall on crisp, clear days, then the imagery is run through their patented processing system, and updated to the Cloud, ensuring that the imagery their customers access is recent.

Post-catastrophe flights are made to capture damage once the storm has passed. This is another popular piece of the puzzle.

Nearmap has partnered with other services, which will take the imagery and create a report transforming square footage into materials needed along with the associated costs. They also provide the imagery to feed the architectural roofing software of some of their partners.

With so many benefits for roofers, only one challenge is evident. Instant access aerial imaging does not necessarily cover all buildings. Agresta said that about 15-20% of the U.S. is not covered by Nearmap's aerial imaging. In those cases, a roofer can access satellite imagery. **MR**



Aerial imagery. Photos courtesy of Nearmaps

The Aerial Imagery User's Viewpoint

Premier Metal Roof Manufacturing provides imagery for the roofers they work with, usually aerial imagery, however, they are not the producers of that imagery. They have subscriptions with aerial imagery services because they find it to be the easiest way to provide this service.

Satellite service covers all areas, however, it is not as accurate as aerial imagery. Drone imagery requires someone to go to the site and take the pictures, or alternatively a customer may provide the drone footage, which has to be downloaded, processed, and uploaded to the internet. With a subscription to an aerial service, a user logs in and the footage is at your fingertips. This is important, says Ray Bowen, President, because Premier Metal Roof Manufacturing strives to provide a 24-hour turnaround to its customers.

Aerial imagery can be tricky though, Bowen says. Tree coverage can get in the way and then drawings from the client are the way to go.

While Bowen characterizes imagery as reasonably priced in general, he does specify that some of the subscriptions they have purchased are preferable to others. Some of them are priced per address; some are per view. Per view means that every separate view over the history of the roof, every angle, every time you access it, you get charged. That can add up.

A challenge that is particular to metal roofing is that the estimate has to be really accurate. If you are doing shingles and you are within 1% you can make it work, but you don't want to cut any metal until you know the exact measurement for metal roofing. Ultimately the responsibility lies with the roofer, since roofers may have different ways of installing roofing, so if any adjustments are needed they must specify what they need for their job.

The precise requirements of metal roof work is why Sky Cad™, the company's proprietary software was developed. Once the client has obtained the imagery, it can be run through for analysis including square footage, materials needed, and costs. This is included with the quote.

Bowen said that they strive to be the best partner they can for their roofers so that they have accurate estimates and information with a quick turnaround, and they can win more bids. Hopefully, if Premier Metal Roof Manufacturing has done a good job of partnering with them, then the roofer will procure their supplies from them.

MR



Recover Or Replace?

Considerations when deciding between recovering or tearing off and re-roofing

By Charlie Smith, McElroy Metal

Reroof over existing or remove and replace? That is a question that has to be answered with every metal roof that has reached the end of its service life. Whether the existing roof is a 36" wide exposed fastener panel or a standing seam installed over open framing on a metal building or over solid decking, you have a choice whether to recover the existing roof or remove and replace. Many factors need to be considered when making this decision, including the sensitivity of the occupant to disruption, the role the existing roof system plays in stabilizing the structure, the difficulty of removing the existing roof, whether the existing roof is installed over a solid deck or open frame, the capacity of the existing structure to carry more weight, the owner's desire to add insulation, the underside appearance, and the condition of the purlins or deck, to name a few.

When assessing occupant disruption, a main consideration is determining if the existing roof is installed over a solid deck or on open purlins. If a solid deck, the disruption of remove and replace and associated waterproofing will be miniscule in comparison to an open-frame structure. If the existing roof is installed on a metal building with open framing, then recovering the existing roof reduces the risk of flooding the building and minimizes disruption to the occupant. Removing and replacing a roof on one of these structures will most likely result in having large sections of the building open and exposed to the weather during the process. This is partly due to the ever-increasing design wind pressures and snow loads imposed by updated building codes. The new roof will need to meet the current loads, which will probably be significantly higher than



Aerial view of roof grid. PHOTO COURTESY OF MCELROY METAL



Purlin Strapping. PHOTO COURTESY OF MCELROY METAL

the loads required when the original roof was installed. Higher design loads mean additional purlins may need to be added in the perimeter, corner and snow drift areas. Fortunately, with recover, there are ways to meet these increased loads without adding purlins. Contractors and building owners need to be aware that if the roof is removed, adding or replacing purlins means opening the building over an entire bay which can leave a hole over 30 feet wide in the roof. This hole may be impossible to open and close in one day, depending on panel lengths and penetrations. This is one reason that recovering the roof on a metal building is often the best alternative.

The two most common types of metal roof systems being used today are 36" wide sheets installed with exposed fasteners and free floating standing seam systems that are installed with concealed clips and fasteners. The exposed fastener systems are fixed rigidly to the substrate and standing seams are free to expand and contract as the temperature changes. The most common exposed fastener panel is called an R-panel with major ribs that are 1¼" tall and 12" on center. On a metal building, the R-panel is attached to every purlin 6" to 12" on center in horizontal lines typically 5' apart. They are also attached at the side lap every 3' in a vertical line 6" to 12" on center. On an open-frame metal building, this type of attachment is critical to the building design. In simple terms, the roof panels are stabilizing the purlins and holding the building square. If you remove an existing exposed fastener R-panel on a metal building and replace it with a free floating structural standing seam, you may end up with a king-sized problem. For this reason, it is almost always better to recover an existing R-panel if the intent is to replace with a standing seam. R-panels can be replaced in kind, one or two panels at a time or, if you want to replace an R-panel

COVER STORY

with a standing seam, you will most likely need to add bridging, bracing, or strapping between the purlins to stabilize them. A qualified engineer needs to look at the structure and determine the best way to stabilize the purlins.

Some roof panels are very difficult to remove while other panels come right off. The easiest panels to remove are exposed fastener panels. As outlined above, you may have to be careful about doing it, but a crew can remove a lot of exposed fastener panels in a day. Snap together and single-lock standing seam panels are relatively easy to remove. Double-lock standing seams are very difficult to remove and require a seam cutter to get them off.

In general, based on interruption, ease of removal and the existing roof's role in stabilizing the structure, here are some scenarios and suggestions [See Figure 1]:

One of the biggest concerns about recovering an existing roof with another metal roof (particularly on a metal building) is the additional weight of the new roof. The International Existing Building Code has a section that addresses adding a new roof on top of an old roof. In section 707, the code states that during reroofing, the building structure must be brought

IF THE ROOF IS ON OPEN FRAMING:

Existing R Panel to Standing Seam	Recover
Existing R Panel to R Panel	Remove & Replace or Recover
Existing Structural Standing Seam to Standing Seam	Recover

IF THE EXISTING ROOF IS ON A SOLID DECK:

Existing Screw Down Panel	Remove & Replace with Standing Seam
Existing Snap Seam Standing Seam	Remove & Replace
Existing Single Lock Standing Seam	Remove & Replace
Existing Double Lock Standing Seam	Recover

Figure 1

up to the current code. One of the exceptions to this rule is a second layer of roofing may be added as long as it weighs less than 3 pounds per square foot. There are at least seven ways to recover an existing metal roof with a new metal roof and they all weigh less than 3 pounds per square foot. There are also ways to increase the load carrying capacity of metal building purlins while reroofing over certain types of existing roof panels. There has been a lot of testing done recently and papers written over the past couple of years on metal building strengthening while doing a retrofit. I am currently working on a job where recovering the roof actually added 7 pounds per square foot of



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load carrying capacity to the existing structure! Most people are concerned about adding weight to their building when the fact is, in many instances, the structure is being enhanced by adding a second layer of roofing. The bottom line is that it is always a good idea to have an engineer that specializes in metal buildings look at the structure to make sure the building is suitable for recover.

The IECC (International Energy Conservation Council) mandates that any time a roof is removed and replaced on a building where people live and work, the new roof must meet the current insulation requirement. Usually that is R-30 which is around 5" of rigid polyiso or 9" of batt. One thing is for sure: Adding 9" of batt insulation in an existing metal building can be extremely challenging, especially where there is a lot of bracing, piping or conduits between the purlins. Also, there are very few standing seam panel clips that will accommodate that much batt over the purlins. On a traditional building with a solid deck, adding rigid insulation is easy, whether the existing roof is removed or left in place and recovered.

There are a couple of exceptions to the requirement to bring the insulation up to code during reroofing. One is to leave the existing roof in place and to cover it with another roof. Recovering puts the owner in charge of how much insulation



Removing and replacing the standing seam panels on a roof with an open frame. PHOTO COURTESY OF MCELROY METAL

he wants to add to his building. There is an air space formed between the two roofs that can be filled with batt or rigid insulation. This air space can also be left open and ventilated. A ventilated air space between two roofs can greatly reduce the heat transfer from the outside and the only additional cost is the perforated metal trim at the eave and ridge that allows air to pass

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between the two roofs. Finally, if the owner is planning to be there a long time, a great way to remove and replace on a metal building is to remove the existing roof panel and insulation down to the purlins, then install a 26 gauge liner panel on top of the purlins, add the required thickness of rigid insulation on top of the liner, then high temp peel and stick followed by a structural standing seam on top of the iso attached through to the purlins. This eliminates the batt insulation and vinyl backer and replaces it with a nice clean white metal ceiling. This system also eliminates the thermal bridging associated with compressed batt over the purlins.

Many existing metal buildings have interior appearance issues where the batt insulation is full of holes, sagging or hanging down from the ceiling. Normally that dictates the roof has to come off to replace the insulation. That is easy enough to do if the existing roof is an R-panel and the plan is to replace in kind. If the existing is an R-panel and the plan is to replace with a standing seam, adding bracing to stabilize the purlins may be required. If there is easy access to the underside of the roof, one solution is to leave the roof panels as they are, cut the insulation out from the inside then install another R-panel or standing seam over the top of the old roof. Insulation can be added between the two roofs or just ventilate the resulting air

space. That ensures that the building structure is not disturbed.

Typically, if purlins in a metal building need to be added or replaced, the existing roof has to come off. There are instances where this work can be accomplished from the underside, but most purlin addition or replacement is done from above. There are two reasons to add or replace purlins in a metal building: One is that they are no longer serviceable. This can be due to corrosion or damage and typically involve the eave strut. The other is the requirement to add purlins between the existing purlins to meet the current wind or snow loads. This can be done to beef up the building structure or to increase the roof system wind uplift capacity by providing more points of attachment. If the purpose of adding purlins is to enhance the roof system, this work can be performed on top of the existing roof by assembling a "grid system" and attaching it through the old roof into the structure below. Grid systems can add considerably to the cost of doing a retrofit, but greatly reduce the interruption to the occupant.

Each re-roofing job presents its own challenges and opportunities to solve problems that best suit the owner's objectives. The default position is normally to remove and replace the existing roof and the recover option is often overlooked. Recover is often the best solution for many jobs. **MR**



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Behind the Build

Q&A Guest: Tony DelGhingaro, DR!PSTOP

By Metal Roofing Magazine Staff

Tony DelGhingaro has been working in the building industry for over nine years focusing on condensation control in metal buildings. He works with roll formers, builders, contractors, & salespeople, as well as other industry professionals. He feels he, “could not have asked for a better product to be associated with than DR!PSTOP.” The first thing Tony learned is that condensation is tied directly to ventilation—or the lack thereof:

“While I have a great understanding today, I continue to learn and share best

practices. Even though condensation control membranes were not new in 2013, most of the people I met in the beginning, were not sure what it was, and they really did not know how it worked. This provided a great opportunity for me to share the knowledge I had and offer different solutions. I have had a great time traveling across the US and Canada meeting and working with such a diverse group of building professionals. It allows me to share best practices learned in one place and bring them to a completely different geographic region.

“The best part of my job is watching my customers grow their businesses; and I’m happy to say that, after nine years, I can no longer keep track of all the different success stories. I like to think DS has played a role in that growth.”

Q: How large of an issue is condensation perceived by post-frame building consumers?

A: Unfortunately, it is often overlooked by consumers until it becomes a problem. Many initially think their roof is leaking;

Consumer Considerations

5 *Pro Tips* that will benefit your customers:

- 1** Ventilation is important to the function and longevity of their build. Explain how ventilation relates to human breathing for an easy demonstration.
- 2** Consider what will be stored in their new building so you work together to pick the right type of moisture control for their needs.
- 3** Provide a time/cost estimate for the insulation install for the consumer to consider against the cost of a moisture control membrane.
- 4** Make sure customers clearly understand what is warranted by the builder and what is warranted by the manufacturer.
- 5** Make sure your customers know what to look for to maintain their building and who to contact if they have an issue.



The popularity of post-frame homes is growing. Help your potential customers understand why they may be a better choice than a traditional stick-built home. The brand new *Pro Tips On Your Post-Frame Home* is available exclusively on Amazon: <https://tinyurl.com/25aev5n7>.

only to find out later it is condensation that is dripping from the bare metal above.

Q: What actually causes condensation to occur?

A: Warmer wet air touches a cooler surface and moisture falls out of suspension. The difference in temperature and the dew point determines when water vapor becomes liquid. An easy example most everyone is aware of is the ice-cold glass sitting on a table; the same thing happens inside a building where the warm humid air rises and hits the colder metal roof.

Q: How does it impact a post-frame structure?

A: If the condensation is allowed to clear, or if it can be prevented altogether, then

there is almost no impact. However, if nothing is done, the results could be anywhere from water damage to contents below to mold & rot forming on purlins. Essentially, it could be like having it rain inside the building.

Q: What are the options builders have for dealing with the issue?

A: I always start by saying EVERY building needs ventilation. With that in mind, I believe there are two different ways to deal with condensation. The first way builders remedy the problem is with insulation. The idea here is to prevent the temperature difference from happening at all. The other way is to use a condensation control membrane; like DRIPSTOP! This option captures the moisture overnight and clears it the next day.

Q: Are there cost differences in the remedy method/materials selected by the builder?

A: Compared to not doing anything, which happens more than the building industry would like, there is an additional cost to both options. Since insulation requires additional time and labor to install, there is an added cost on top of the purchase price of the insulation. Products applied at the same time the metal panels are produced and arrive on the jobsite already installed, eliminate the additional time and labor costs.

Q: What is the impact on a builder's customer in terms of longevity?

A: I believe both options above can be great solutions for long periods of time;



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especially when installed to manufacturers' specifications. With some membranes, the customer even gets a maintenance free option with a 20-year warranty.

Q: Are there variable installation time impacts involved for the builder?

A: With a condensation control membrane, there is no additional time or labor to install for the builder. However, insulation does require additional time and labor hours.

Q: What is the biggest issue that arises that causes a repair to be needed? Is there a way for a builder to minimize the issue from occurring?

A: If nothing is used and condensation is allowed drip down, it can be quite costly. Obviously, it depends on what is being

stored below. I have also seen older buildings without adequate ventilation with plenty of mold spots and darker areas and rot on the purlins. Over time these may need to be replaced. Using a membrane prevents the dripping and further damage from moisture.

Q: What do builders need to teach their customers about maintenance checks regarding moisture control?

A: Another tricky question. Personally, for general maintenance, I would recommend a building owner do a visual inspection of the entire building at least a couple times a year, inside and out. Look for any changes (water spots, darker areas, or structural changes) in the roof line, the doors & windows, the ceiling, or framework above, along with the floor and any drainage systems. For new

buildings, I would suggest the same after heavy winds and storms the first year or two.

Q: What is important to know about ventilation?

A: In my experience, this is probably the most confusing or misunderstood part of the building / process. I have been in too many buildings that claim to be vented – only to put a meter at the ridge and see ZERO air movement. This is the single biggest cause of moisture and condensation problems inside buildings. Venting a building is similar to us breathing, where proper airflow makes everything healthier. Regardless of using bare metal, insulated metal, or metal with a condensation membrane — just like people, ALL buildings need to breathe! **MR**



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Metal Roofs Make Business ‘Recession-Proof’

By Anthony Brass

In 1990, two men, Howard Eigsti and David Kennell, started what would eventually become H&D Quality Builders. The business focused on agricultural and residential remodels, smaller jobs and repairs. Soon, David’s brother Jim came on. Eventually, Howard and David left the company and Jim Kennell took on as owner.

While ownership changed through the years, the founders’ initials remained in the name of the company.

Todd Meinhold joined the company in 2000. A former district salesman for a seed corn company, he didn’t know as much about construction as the owners, but was seeking a change. He worked the job and in 2005 purchased the business, once again keeping the name. Another thing also remained constant with the company: post-frame building. “We’ve continued to maintain a post-frame emphasis,” says Meinhold, current owner and president.

H&D builds many two-story post-frame homes, commercial structures, agriculture buildings, and churches. Meinhold makes reference to the two-story residential bardominium and its growing popularity, along with larger, taller structures they build; “In the [post-frame] industry, three stories have become more common.” He says equipment is larger to accommodate those projects.

“Most of our agriculture shops are 18’ to 20’ now,” Meinhold says. “Equipment got bigger and taller.”

Cool Roofs

Meinhold wanted to add more services to gain more capital. In 2008, he wanted to make his business recession-proof. He says it’s the roof that is what somebody always needs. The focus on residential



H&D Quality Builders constructs a post-frame building around and over an existing structure. PHOTO COURTESY H&D QUALITY BUILDERS

metal roofing came out of necessity; during The Great Recession of 2008, they established Cool Roofs and started putting up the “cool roof” metal option for clients. He adds H&D combines radiant barriers that help with the reflectivity and limit heat infiltration. “It’s not only a cool-looking roof but actually ‘cools’ your roof. The cool roof is what has really propelled us to stability in our business.”

Partnerships and Patents

H&D is a dealer for Borkholder Buildings and Supply. The two combined forces years ago to drive the number of post-frame projects. “Working with Borkholder as a dealer is an integral part of our business,” Meinhold says.

Meinhold also partnered with Dwayne Borkholder to patent the new Rapid Frame



System (RFS), to minimize the amount of labor and resources required and to increase post-frame building efficiency. “RFS is designed for the heavy lifting to be done by equipment, and with only one person on the job who ‘has to know’ the exact procedure and coordinating the components, while others have time to learn the why and how,” Meinhold says.

In addition, the company works with McElroy Metal, who supplies H&D’s metal roof and wall panels.

Meinhold also responded to OSHA requirements for workers to wear safety harnesses. They developed Ridgeline

Safety Systems, a patented, hidden safety anchor for post-frame and metal roofing applications.

“Too many people were tied off on the same anchor. And, moving the anchor on the roof, it’s too slow, too inefficient.” He adds those who are interested see the value with a permanent anchor system — one that is “universal” where many types of workers can benefit.

Future Builders

Meinhold says finding workers for the metal roofing industry is challenging. He does have a voice within the community and sits on his local school board. He says he brings his real-world stories to the meetings. Meinhold promotes vocational programs for youths and says they’re even more imperative for repopulating the industry workforce.

“If these kids go get these automotive tech jobs and construction jobs and welding, they’re going to make a nice living, much like they did in the ’70s — you took on those jobs where you were getting paid more than a living wage, but it was hard work.”

Project ‘Over the Top’

Meinhold remembers overcoming the challenges of a project – one where H&D won a Building of the Year award. Their client, Tri C Co., was in an older single-story building and needed a taller post-frame structure built over the top. They wanted to continue their production while H&D performed the work. “It was quite an engineering feat to get it done,” he says.

The company built the shell over the existing structure, but later had to have the clients vacate in order to tear down the building beneath.

“It shows the ability of what post-frame can do and its flexibility. I like the challenge. Our ‘niche’ is [to build] what a lot of others don’t think is possible.” Meinhold says many companies are constructing post-frame buildings, but not willing to work on every type. “It’s the oddball-type jobs that can present challenges that a bigger company can’t

afford to take on because it takes too much time. We’re able to take on a ‘scalable’ project that’s different.”

H&D Quality Builders knows adjustments are necessary in their industry. They’ve become a company that’s focused on helping solve the labor and skills gap

with innovative products. “We are helping our aging workers work more years on the job while the ‘new’ inexperienced worker works with intuitive innovations that speed up the learning curve until they gain the knowledge necessary to lead their own crew and jobs.” **MR**

The advertisement for the Western Roofing Expo features a central graphic with a red starburst and the text "WESTERN Roofing EXPO" in a stylized font. A QR code in the top right corner is labeled "SCAN ME". Below the main title is a photograph of a construction worker in a white hard hat and safety harness using a power tool on a roof. At the bottom of the ad, a dark blue banner contains the event details: "PARIS LAS VEGAS SEPTEMBER 24-26 REGISTER ONLINE: WESTERNROOFINGEXPO.COM". A grid of logos for various sponsors is displayed above the banner, including ABC Supply Co. Inc., ASC AMERICAN INDUSTRIES INC., ANM, BEACON, CARLISLE, CertainTeed, Dataforma, DURO-LAST, eagleview, EAGLE ROOFING PRODUCTS, GAF, GLO GROUP, Makita, siplast, Malarkey Roofing Products, ROOFERS - COFFEE SHOP -, ROOFING CONTRACTOR, SOPREMA, WESTERN ROOFING, and WESTERN STATES ROOFING CONTRACTORS ASSOCIATION.

Garland Partners with Cleveland Non-Profit

The Garland Company, a full-service roofing manufacturer and building envelope solution provider based in Cleveland, Ohio, announced a 2022 partnership with local nonprofit University Settlement, highlighted by a recent “Spirit Week” employee charity drive that raised \$50,000.

University Settlement is a 501(c)(3) nonprofit that has been providing much-needed social services to the residents of the Broadway Slavic Village neighborhood since 1919. Garland’s Spirit Week activities included a silent auction, games, raffles, and other employee-led fundraisers throughout the week, with 100% of proceeds going to support University Settlement’s mission.

Matt McDermott, President of Garland’s US Roofing Division, said, “Our manufacturing and US headquarters have been located on East 91st Street since 1919, and our goal is to be an active contributor to the health and vitality of our neighborhood. The opportunity to partner with University Settlement and support our neighbors across Broadway Slavic Village was one that really galvanized our employees and resulted in what we feel was our best Spirit Week ever. The momentum has continued, as Garland team members have found a number of ways



Garland US Roofing Division President Matt McDermott (left) presents University Settlement Executive Director Earl Pike with a check for \$50,000 raised through Garland’s recent “Spirit Week.” Photo courtesy of Garland.

to support University Settlement with hands-on volunteering.”

Added Earl Pike, Executive Director of University Settlement, “While the financial support is wonderful and appreciated greatly, our team also valued the discovery in Garland of a kindred spirit. As an employee-owned company, Garland’s team is accountable to each other, they care for each other, and they have ownership of the work they do each day. Our goal at University Settlement is not just to empower our employees with that same feeling, but also the residents we serve.”

Study Finds Steelmaking by U.S. EAFs Produces 75% Lower Carbon Emissions

Steel produced by electric arc furnace (EAF) steelmakers in the U.S. has a carbon intensity that is approximately 75% lower than traditional blast furnace steelmakers. This is the finding of an independent study of steelmakers worldwide conducted by CRU Group, a global business intelligence firm specializing in metals manufacturing. The study was released by the Steel Manufacturers Association (SMA), the largest steel association in the U.S., representing the EAF steel industry and over 70% of steel made in the U.S. The study marks a new milestone in objectivity, accuracy, and comprehensiveness of measurement for greenhouse gas (GHG) emissions by the steelmaking industry.

“Something that can’t be measured can’t be managed, and our new study conclusively measures and validates how using recycled scrap-based EAF technology is the most sustainable means of producing steel today,” said Philip Bell, president, SMA. “Using an established, proven steelmaking process, EAF producers are making steel at far lower carbon-intensity levels than traditional steelmakers around the globe. There is a lot of inaccurate and misleading information about steelmaking, and we believe this independent study will help further our efforts to achieve a low carbon future.” **MR**

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Making the Most of Trade Shows

Capitalize show attendance by establishing clear objectives

By Gary Reichert

Fall has arrived again. It happens every year about this time. The other thing that starts now is trade shows. Most of the large shows in our industry occur either in fall (Fabtech, METALCON and the Construction Rollforming Show) or early in the New Year (International Roofing Expo, Frame Building Expo, and the Garage, Shed & Carport Builder Show).

Last year we reviewed a few ways to make shows successful for both attendees and exhibitors. Those articles are still available online, in their complete form.

Some highlights worth revisiting are the big takeaways.

Bullet Points For Review:

• Find the right show

◻ Is the focus of the show appropriate to your business?

◻ Make sure the show's strengths match your objectives.

▪ Strengths could be education, networking opportunities or specific exhibitors.

◻ Location, travel, expense and timing of the show

▪ If you are driving, check the availability and convenience of parking at the show venue.

• Make the most of your time at the show

◻ Establish objectives and focus on your goals.

◻ Work the show floor and have a list of "must see" exhibitors.

◻ Be prepared for opportunities in strange places. People are in places other than their booths.

◻ Have and practice your elevator pitch. A 15-second, brief overview of what you bring to the party.

◻ Shows are busy the first day and slow the last. Use that to your advantage.



• Avoid common mistakes:

◻ Plan travel and have a Plan B. Flights scheduled are currently often erratic.

◻ If you make a critical contact, follow up.

◻ Any critical information (business cards, etc.) take pictures with your cell phone in case they are lost.

◻ Don't take everything you are given. Most literature is available online; why carry what you don't need?

◻ Be considerate. Do not try to sell to the exhibitors. Most shows have rules that non-exhibiting vendors can be ejected.

To Do #1

The #1 next thing to do is take advantage of the face-to-face opportunities.

One of the biggest advantages of a show is the time spent with vendors, customers and peers. Meeting live and in

person provides unique opportunities to make and advance relationships faster and in ways not possible in email or video meetings. Relationships are the key to building long-term success in this or any business-to-business endeavor. Use this opportunity to full advantage. Here are a few suggestions:

There is a saying: "A good sales person has the gift of gab, a great sales person listens twice as much as they talk." It is human nature to tell others about yourself. It plays toward ego and the social nature of humans. Use this to your advantage.

The objective of listening is to acquire information. The easiest way to get people to talk is to ask questions.

Understand the function of questions. There are two types of questions with different purposes.

Closed questions often have yes/no



Explore The Benefits of Rolling Your Own Panels

When you manufacture your own roof panels and trims, you have better control of your company's destiny.

Over the last two years, we've heard reports of a lot more supply chain issues than normal. Taking a kink out of the supply chain is only one of the benefits of roll forming and brake forming your own panels and trims. Other benefits include:

Waste management — You only roll or bend the sizes and quantities of components that are needed. There's no "minimum order" to deal with and you can witness and assess any coil stock variances before they become problematic.

Increase profit margins — With less waste, you're not paying for material that ends up in the scrap pile. Plus, if you're controlling the production, you know how much the labor to roll the form the material will cost.

Independence — You can work on your own schedule; you are not reliant on a supplier's schedule and manufacturing capabilities.

Quality control — Since you're manufacturing the panels and components yourself, you can't be displeased

with your supplier.

Shipping — Rolling or folding at your own facility, there are no shipping delays or shipping costs. Concerns about damage during shipping are also eliminated.

Only you can determine whether the time is right to start manufacturing your own panels. However, contractors considering the purchase of metal forming equipment should start by educating themselves on various equipment types. Shop around, and consider not only the price but quality reputation, warranties, and service.

There's only one trade show that is 100% dedicated to roll forming building components: The Construction Rollforming Show. Taking place in New Orleans Oct. 26-27, this show consists of an exhibit floor filled with material suppliers and equipment manufacturers, as well as educational programming that is included to teach component manufacturers — and prospective component manufacturers — what they need to know to be successful.

Details are added to the show website, www.constructionrollformingshow.com, as they develop. **MR**

or a one word answer. Closed questions are designed to confirm information the questioner already knows or limit the response to allow the questioner to maintain control of the conversation. An example would be, "Can I borrow a pen?" The answer is yes or no, and the objective of the conversation is met. Both parties can move on. Closed questions have strategic value in a conversation but have an implied "stop" command after the answer is supplied.

Open-ended questions are designed to have the person answering elaborate and share information. An example would be: "Why do you need a pen?" A closed follow-up would be: "Did you need to sign something?" The closed question has another yes/no answer, and the conversation stops. The open question requires a broader answer with the speaker sharing more information.

Open-ended questions help you make the conversation more personal, which is one of the keys to building relationships. They create the opportunity to learn something new about the person or subject you are dealing with. Exhibitors at trade shows talk to show attendees, one after another in rapid succession for several days. They will discuss their products hundreds of times during the show, typically falling into patterns using the exact same phrase over and over. There will be far fewer conversations where their kids and yours

Why should a contractor attend the Construction Rollforming Show?

The Rollforming Show is a great opportunity for roofing and siding contractors to see all of the new rollforming machinery. It also provides attendees the ability to see what's new in the accessories needed by rollforming contractors such as fasteners, tools, flashings and much more.

*Steve Butler, Sales Manager
Dynamic Fastener*

go to the same college or where both people collect Beatles records. These conversations stand out and are what they will remember after the show.

To Do #2

The #2 thing is to follow up.

This item was mentioned in the first article, and is referenced in the bullet points, but it is so important that it bears repeating. If the contact or conversation is important, follow up!

It is unrealistic to expect salespeople at a show to remember you. The good ones will, but when you walk a show and one third of the people manning booths are staring at their phone, it is obvious there are not that many good salespeople. Unless a salesperson has a reason to view you as a legitimate prospect, the harsh reality is you will probably not be remembered. A detail or two will help you stand out. Also share a personal

detail if there are similarities or shared experiences.

The salesperson may or may not remember you, but show you remember them. It will build the relationship and make it more likely for the person to respond. Take advantage of the information gained with open questions to re-establish the personal connection. An email example could be: "Hi John, I hope your son's birthday party was a success. Five is a fun age." Then, move on to what you wanted to discuss. The formula for a successful business contact is: Courtesy, Purpose, Action. The personal item is the Courtesy phase and leads to "I am emailing because ..."

Building relationships is about the other person — not you. If you have personal knowledge about the other person, they feel obligated to reciprocate. Use that social pressure to your advantage. It increases the likelihood you will receive

a response. I am old enough that having to "sell" a salesperson seems ridiculous, but, unfortunately, it is common today.

Conclusion

There are many ways to work a trade show. Times have changed and many of us gray beards remember the old days. No sitting in the booth. Say hello and shake hands with everyone, even people passing in the aisle. I still have our business cards blank on the back so we can take notes. Now badge scans and digital cards have changed the dynamic. But no matter what changes, the person-to-person contact and following up after the show will remain good practices. Whether you go to METALCON, the Construction Rollforming Show or another show, take the steps to maximize your return on your investment and make it a success. **MR**

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Florida Roofing Expo

Exhibitors, Attendees Were Out In Force & Ready To Do Business

By Metal Roofing Magazine Staff



Jacksonville, Florida-based Triangle Fastener Corporation supplies a full line of fasteners, sealants, tools, and accessories to the commercial construction industry. Find TFC at the Construction Rollforming Show in Booth #428.

FRSA's convention consists of three days of education, networking, family fun, sports and friends, along with two days of FRSA's trade show, the Florida Roofing & Sheet Metal Expo. The 2022 Florida Roofing & Sheet Metal Expo was held at the Ocean Center in Daytona Beach, Florida, July 20-22. The Expo was held in conjunction with FRSA's 100th Anniversary Convention; FRSA's first convention was held in Daytona Beach a century ago.



Brenda Brown was on hand in the Innovative Energy booth to educate roofers about the benefits of reflective insulation. Find her the at the Construction Rollforming Show in Booth #626.



Jasson Johnson, trainer in Reed's Metals' Masters program, explains one of the training stations used in the program. The components in red are the pieces that students learn to form at this particular station.

Booth spaces were fully booked months ahead of the event; the Expo floor hosted more than 230 exhibitors, which filled 458 booths. With two dozen continuing educational credit seminar hours available, attendees were able to fulfil at least some of their CEU requirements. (The State of Florida requires every licensed contractor operating in the state to earn 14 hours of continuing education credit during a two-year cycle.)

Overall, exhibitors were pleased with their Expo experience. Attendees were engaging and plentiful.

Attendees were drawn to the Reed's Metals booth, which exhibited one of the training stations for the metal roofing Metal Masters program — and a stock car. (Reed's even supplied the metal for the stock car body.)

David Chavarria, Hershey's Metal Meister, said this was their first time setting up at the show. He was pleased with the results. "Florida's not really our market, but we've gotten a lot of good leads down here," he said.

"Triangle Fastener has been a proud participant of the FRSA Show for 28 years and counting," said Jaron Proulx, National Roofing Specialist, Triangle Fastener Corporation. "FRSA once again brought together vendors, contractors, and manufactures together to share product knowledge and strengthen our partnerships, both current and new. This year's show celebrated the 100th Anniversary of FRSA, and the turn out surpassed expectations. TFC can't thank enough, everyone who attended, to make this year's show a success!"

David Quehl, Director of Sales & Marketing, Direct Metals, Inc., was also pleased with the show. He said, "There were 40



Kris Rose (left) and Eric Velliquette man the Lakeside Construction Fasteners booth. Find Lakeside Construction Fasteners in Booth #303 at the Construction Rollforming Show.



ASC Machine Tools, Inc. designs and manufactures premium quality roll forming machinery in Spokane, Washington. Find them at the Construction Rollforming Show in Booth #511.

more supplier booths this year than last. The Florida market remains robust in new and re-roof activity. Some suppliers thought the location was too far east for contractors from west Florida to travel.”

D.I. Roof Seamers was also pleased with the turnout. “FRSA is always a great show for D.I. Roof Seamers to attend, and we were very honored to be a part of the 100th Anniversary in Daytona Beach this year,” said Joe Patrick. “FRSA is always a fantastic opportunity for our company to fellowship with partners in the industry, as well as meet our builders and contractors face to face. This year was exciting because we participated in the fishing tournament as well. Congrats to FRSA on 100 years, and for always hosting an exceptional trade show and convention.”

Amanda Dunlap, Marketing Manager, Safety Hoist Company, enthused:



Glick Metals LLC manufactures Snap-Z Roof vents. These are high-quality, independently tested roof vents designed to work with standing seam roofing applications. Find Snap-Z at the Construction Rollforming Show in booth #430.

“FRSA’s 100th Expo did not disappoint! We got the chance to show off our patented electric material hoist and talk with some of the best in the industry. We learned a lot and had a ton of fun with our industry peers. We can’t wait to see everyone again next year in Orlando!”

Representatives of Lakeside Construction Fasteners were also impressed: “At Lakeside Construction Fasteners we were very impressed by the solid turnout at the 2022 FRSA Expo that allowed us to reunite with past customers while forging ahead with new opportunities,” said Eric Velliquette, VP Sales & Marketing. “The FRSA Organization did another outstanding job hosting this expo in Daytona Beach and LCF looks forward exhibiting at future FRSA Expos!”

Looking Ahead

FRSA’s 101st Annual Convention & Expo is scheduled for July 12-14, 2023. Next year’s event will take place at the Gaylord Palms Resort & Convention Center in Kissimmee, Florida. Future expo dates: June 5-7, 2024; June 4-6, 2025; June 10-12, 2026. **MR**

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project of the month

Isaiah Industries
www.isaiahindustries.com



Residential Reroof

Jason, an Ohio homeowner, needed a new roof remodel for his large, complex house. After lots of research, he found that metal roofing was the best option for its energy efficiency, durability, and flexible design. He discovered Classic Metal Roofing Systems of Kentuckiana and was impressed by their portfolio of completed jobs. His installation went smoothly and resulted in a spectacular metal roof with a ThermoBond finish. **MR**



Project Overview

Location: Washington Court House, Ohio

Roof Size: 18,000 sq. ft.

Contractor: Classic Metal Roofing Systems of Kentuckiana

Installer: Ron Drake

Roof Panel: Country Manor Shake

Insulation: Isaiah Industries Foam Inserts

Underlayment: Roof AquaGuard UDLX

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CALENDAR

SEPTEMBER

Sep. 24-26

Western Roofing Expo (WSRCA), Paris, Las Vegas, Nevada; westernroofingexpo.com

Sep. 27-29

RCAT / MRCA Roofing Conference, Fort Worth Convention Center, Fort Worth, Texas; www.roofingcontractors-texas.com

OCTOBER

Oct. 12-14

METALCON, Indiana Convention Center, Indianapolis, Indiana; www.metalcon.com

Oct. 26-27

Construction Rollforming Show, Ernest N. Morial Convention Center, New Orleans, Louisiana; www.constructionrollformingshow.com

NOVEMBER

Nov. 6-8

RoofCON Roofing & Solar Conference, Orange County Convention Center, Orlando, Florida; roofcon.com

Nov. 8-10

FABTECH, Georgia World Congress Center, Atlanta; www.fabtechexpo.com

2023

JANUARY

Jan. 18-19

Garage, Shed & Carport Builder Show, Greenville Convention Center, Greenville, South Carolina. garageshed-carportbuilder.com/show-registration/

Jan. 23-25

MCA Winter Meeting, Hyatt Regency in Clearwater Beach Resort & Spa, Clearwater, Fla.; metalconstruction.org

MARCH

March 7-9

International Roofing Expo, Kay Bailey Hutchison Convention Center, Dallas, Texas; www.theroofingexpo.com **MR**

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Number of copies of single issue published nearest to filing date: 0. 3. Non-requested copies mailed at other Classes through the USPS. Average number of copies each issue during preceding 12 months: 20. Number of copies of single issue published nearest to filing date: 15. 4. Non-requested copies distributed outside the mail. Average number of copies each issue during preceding 12 months: 100. Number of copies of single issue published nearest to filing date: 250. E. Total Non-requested distribution. Average number of copies each issue during preceding 12 months: 120. Actual number of copies of single issue published nearest to filing date: 265. F. Total distribution (sum of 15c and 15e). Average number of copies each issue during preceding 12 months: 25,648. Actual number of copies of single issue published nearest to filing date: 25,892. G. Copies not Distributed. Average number of copies each issue during preceding 12 months: 50. Actual number of copies of single issue published nearest to filing date: 25. H. Total (sum of 15f and 15g). Average number of copies each issue during preceding 12 months: 25,698. Actual number of copies of single issue published nearest to filing date: 25,917. I. Percent paid. Average percent of copies paid/requested for the preceding 12 months: 99%. Actual percent of copies paid/requested for the preceding 12 months: 99%. 16. Electronic Copy Circulation: A. Paid Electronic Copies. Average number of copies each issue during preceding 12 months: 0. Actual number of copies of single issue published nearest to filing date: 0. B. Total Paid Print Copies (Line 15c) + Paid Electronic Copies (Line 16a). Average number of copies each issue during preceding 12 months: 26,562. Actual number of copies of single issue published nearest to filing date: 26,783. C. Total Print Distribution (Line 15f) + Paid Electronic Copies (Line 16a). Average number of copies each issue during preceding 12 months: 25,648. Actual number of copies of single issue published nearest to filing date: 25,892. D. Percent Paid (Both Print & Electronic Copies) (16b divided by 16c x 100). Average number of copies each issue during preceding 12 months: 0. Actual number of copies of single issue published nearest to filing date: 0. I certify that 50% of all distributed copies (electronic and print) are paid above nominal price. 17. Publication of statement of ownership for a Requester publication will be printed in the October/November 2022 issue of the publication. 18. Signature and title of editor, publisher, business manager, or owner: Gary Reichert, Publisher. I certify that all information furnished on this form is true and complete. I understand that anyone who furnishes false or misleading information on this form or who omits material or information requested on the form may be subject to criminal sanction and civil actions.

METALCON

THE ONLY GLOBAL EVENT DEDICATED TO THE USE OF METAL IN DESIGN & CONSTRUCTION



OCTOBER 12-14, 2022
INDIANA CONVENTION CENTER

METALCON 2022

Show Highlights & Educational Programming for Indy Event

METALCON, the only global event dedicated exclusively to the application of metal in design and construction, announces its program line-up for this year's annual conference and tradeshow scheduled from Wednesday, Oct. 12 to Friday, Oct. 14 at the Indiana Convention Center in Indianapolis.

From intensive pre-show workshops beginning on Tuesday, Oct. 11 to 25+ free educational sessions located inside the exhibit hall to inspiring keynotes and in-depth workshops, top industry experts will share their knowledge with attendees who are eligible to earn continuing education credits (CEUs), including AIA and CSI learning units among others.

"We are extremely grateful to our 2022 sponsors; without them the show would not be possible: Mill Steel Company (premier level), CIDAN Machinery Inc., (platinum level), Samco Machinery (gold level), Sherwin-Williams (silver level), and Mac-Tech (silver level) along with long-time partner, the Metal Construction Association (MCA)," said METALCON Show Director, Judy Geller.

Keynote speakers for this year's show include Dr. Melissa Furman of Career Potential, a consulting, training and coaching organization, presenting *Leading for Today and Tomorrow* on Wednesday, Oct. 12th at 10 a.m. Then, on the following day at the same time, American IndyCar Series driver, Josef Newgarden will share fascinating stories on the inner workings of a professional racing program and highlight lessons learned regarding communication and teamwork on his path to the top tier



The METALCON 2022 trade show takes place Oct. 12-14 at the Indiana Convention Center in Indianapolis. Photo courtesy of the Indiana Convention Center

of American Motorsports in his keynote, *The Road to Success*.

A variety of special focus areas are planned, including:

The Architect's Experience

Featuring a series of events over two days focused on the use of metal as a design and construction component, this "show-within-a-show" is for architects, designers, specifiers and engineers to breathe new life into projects and solve a wide variety of architectural, structural, environmental and building performance challenges—all through the use of metal.

Offering exclusive education sessions specific to design professionals, attendees will hear from respected thought

leaders, award-winning architects, and industry experts, including a featured special keynote presentation by the "dean of North American building science," Joe Lstiburek of Building Science Corporation as he delves into the world of energy flow in *There's No Such Thing as a Free Thermodynamic Lunch – How Changing Energy Flow Changes Everything*. Additionally, a special architects-only guided floor tour is planned.

Metal Building Marketplace

Architects and contractors are taking advantage of the benefits offered by metal buildings. This dedicated pavilion features top metal building and components manufacturers, creating a convenient hub for contractors, the design and architectural

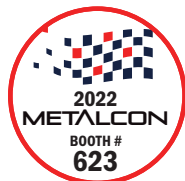
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community, and others to discover the solutions these companies can provide.

The Insulated Metal Panel Pavilion

Back by popular demand, the MCA's Insulated Metal (IMP) Alliance (leading manufacturers, material suppliers, and resellers) brings together six major independent brands of leading insulated metal wall and roof panels that produce 85% to 90% of all IMPs shipped in the U.S. and Canada—all in one location. Understand why IMPs are described as “tomorrow’s roof panels today.”

Plus, drop by the IMP’s Education Center for IMPs — *Installation and Handling Best Practices*. This seminar and demo will focus on best practices and common mistakes made during unloading, storage and handling of installation of IMPs.

NRCA ProCertification®

Through NRCA’s national certification initiative, experienced workers who demonstrate substantial roofing skills and knowledge can become certified in specific roof system installations at METALCON. Visit www.nrca.net for more information.

Learning Centers

METALCON’s FREE education sessions are 60-minute sessions from 11:30 am to 5:00 p.m. on Wednesday and Thursday, and from 10:00 a.m. to 1:00 p.m. on Friday. Organized into three Learning Centers, attendees can earn up to 12 hours of CEUs.

Best Practices

Get solid, sensible advice and the tried-and-true techniques, tools and strategies you need to ensure your business’s growth and success.

Technical Knowhow

Deep dives into code compliance, fire prevention, rainscreen assembly, air flow and other topics critical to product performance, safety and your business.



The Insulated Metal Panel Pavilion will host a seminar and demo focusing on best practices and common mistakes made during unloading, storage, and handling of IMPs.

PHOTO COURTESY MCBOAT PHOTOGRAPHY.

Sustainability

Get the latest information on sustainability practices and products for metal buildings and discover new ways to deal with carbon.

Additionally, METALCON continues to offer in-depth workshops this year on the Tuesday, Wednesday and Thursday of the show to provide cutting-edge education and training, which cannot be found elsewhere. Attendees will be armed with new information, fresh ideas and strategic direction to address some of the major issues facing the construction industry today — skill-building, team-transforming and lifesaving workshops, including:

- Metal Roof Installation Training Certificate Program
- Rollforming for the Metal Construction Industry
- Architectural Excellence with Insulated Metal Panels
- Understanding Metal Roofing
- Life or Death Accountability: Trans-

forming Your Team to Act as if Lives Depend on Them

- Game Plan Your Fall Plan.

And in the METALCON Theater, a special State of the Industry panel presentation will take place on Thursday, Oct. 13, moderated by Paul Deffenbaugh of Modern Trade Communications.

Each year, METALCON gives back to the local community where the show takes place. The event is partnering with World Central Kitchen for this year’s giving back program, which will raise money to help provide food for the hungry in Ukraine.

“We can’t wait to host METALCON in Indianapolis this year,” said Geller. “Indianapolis is within 750 square miles of 75% of the manufacturing distribution space in the U.S.—a central hub for contractors, architects, building owners, manufacturers and suppliers, not to mention all of the great restaurants and shopping within walking distance.” **MR**



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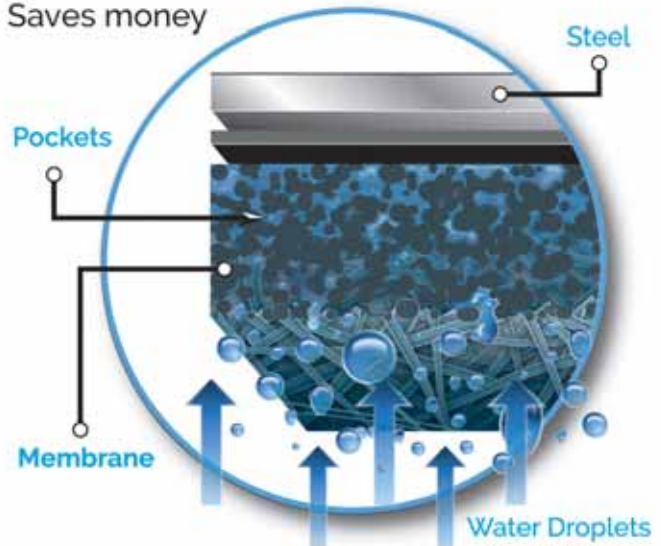
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Understanding Metal's Sustainability Qualities

By Mark Swagerty, Exhibit Sales Manager, METALCON

Metal construction products offer many advantages. Metal roofing, metal walls, metal framing and studs, all bring durability and economic benefits to any project. Metal is where it's at and METALCON is where you find it.

METALCON 2022 is the place to learn about all of the benefits provided by the widest array of metal construction products under one roof. METALCON is scheduled for October 12-14 at the Indiana Convention Center in Indianapolis.

Sustainability is a word that gets tossed around plenty by those promoting metal construction products. Though it's a vague term, it does a great job of blanketing the long list of benefits provided by metal construction products. Sustainability experts at companies exhibiting and/or speaking at METALCON shared their thoughts on metal and sustainability.

Durable and Resilient Metal

Lee Ann Slattery, FCSI, CDT, CCPR, LEED AP BD+C, Sales Support Manager at ATAS International, Allentown, Pennsylvania said, "Metal is a durable, resilient choice for roofs and walls. It performs well in high wind events, hail and in wildfire prone areas of the country. Steel and aluminum are typically manufactured with recycled content and are fully recyclable at the end of a long service life.



Lee Ann Slattery, ATAS International

"Standing seam metal roofing is the best choice for a roof over which solar PV panels are installed. With the use of special clamps, holding PV panels to the metal roof, you won't have roof penetrations. As well, the metal roof will far outlive the life of the PV panels, so there are no worries about having to decommission and remove the solar system to replace roof panels."

Slattery notes insulated metal roof and wall panels (IMPs) are a top product for creating an energy efficient building as well as allowing a building to be constructed and dried-in more quickly than when using other building materials.

"Cool pigments in the paint on steel and aluminum panels help to reduce the cooling load on a building for both roofs and walls," Slattery says. "By incorporating above-sheathing ventilation, with the creation of an air space between the metal roof panels and the roof deck, you can also help to reduce the cooling load. The space also helps to insulate the building in colder temperatures."

Slattery says with solar air heating metal wall panels, preheated fresh air can be brought into a building, significantly lowering winter heating costs, making a building more energy efficient.

"The bottom line is that it's important for contractors and installers to understand the sustainability benefits of metal roofs and walls to help educate a building owner, especially a homeowner who is concerned about the green building product for their home," Slattery says. "They should also be aware of construction site separation of materials to be recycled, to ensure that all metal scrap is dealt with in a sustainable manner."

The importance of Innovation

Alan Scott, FAIA, LEED Fellow, LEED AP BD+C, O+M, CEM, WELL AP, the Director of Sustainability at Intertek said "Long-lived roofing and cladding amortizes its own lifecycle impacts over a longer period of time and protects the rest of the structure, reducing its lifetime embodied carbon impacts," Scott says. "Properly designed and installed metal siding and roofing systems can enhance the resilience of structures subject to wildfire and other extreme weather risks.



Alan Scott, Intertek

"Finally, when it reaches the end of its useful life, it is easily recyclable. This is important given the trend toward extended producer responsibility. Despite the benefits, steel is a material with a high embodied carbon level and it is critical for producers to seek renewable energy innovations to reduce this impact and more manufacturers to favor producers investing in this innovation."

Scott says designers need to know the sustainability benefits of metal roofing and cladding so they can design a system that

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is easily installed correctly. “Any problem with the installation leads to a weak point in the system,” he says. “It’s all about the details. Details have to be designed and installed so there is no loss in performance, which impacts sustainability.”

That means there has to be communication and coordination between the trades during the installation. “Some jobs involve multiple contractors working on different components, so it’s important for everyone to understand the entire system,” Scott says. “Any leaky window or faulty detail will lead to a compromise in the sustainability of the system and possibly a failure that will certainly have ecological and financial implications.”

Scott also says buildings, generally, are constructed to last a long, long time. “Occasionally, a building will outlive its usefulness and need to be torn down or disassembled,” he says. “It’s important to take that into consideration during the design and construction so that metal and other components can be separated and recycled, extending the lifecycle sustainability benefits.”

Metal's Recyclability

Lori Reynolds Morrow, LEED Green Associate, Architectural Project Manager at Sheffield Metals, Sheffield Village, Ohio stated, “The sustainable benefits of the recyclability of metal roofs and walls is evident both when first producing the metal, typically using about 25 percent post-consumer content,”



Lori Reynolds Morrow,
Sheffield Metals

Reynolds Morrow says. “Then, at the end of the roofs and walls’ useful life, that very same metal returning as 100 percent recyclable material. Steel is the most recycled material in the world, with now more than 80 million tons recycled every year in the United States alone. When producing aluminum from recycled aluminum, the process needs only 5 percent of the energy that would be required if producing the aluminum from the raw material of bauxite ore.”

Reynolds Morrow points to a recently released Service Life Assessment by the Metal Construction Association that determined the expected service life of 55 percent Al-Zn Alloy coated steel (Galvalume) to be in excess of 60 years, using best practices. **MR**

Keynote Speakers

METALCON, the only global event dedicated exclusively to the application of metal in design and construction, announces its keynote speakers for Indianapolis in October.

“Each year, we strive to deliver a combination of speakers whose insights are relevant to exhibitors and attendees from all walks of life and at every phase of their careers,” said Judy Geller, METALCON Show Director. “This year, we’re delighted to introduce two individuals from completely different backgrounds who will offer you some fresh ideas on how to be a better team player, a more effective leader and an overall winner.”

On Wednesday, Oct. 12 at 10.00 a.m., Dr. Melissa Furman of Career Potential, a consulting, training, and coaching organization, will present *Leading for Today and Tomorrow*. In this inspiring presentation, Furman will share her thoughts on preparing for “the new era of uncertainty and constant flux.” She’ll present strategies for navigating ongoing challenges such as generational preferences, innovation, diversity, equity and inclusion (DEI), workforce development and more.

Furman previously served as the assistant dean and currently serves as a faculty member at the Hull College of Business at Augusta University, but her passion for career, leadership, and organizational development inspired her to launch her coaching business. She brings 10+ years in higher education—particularly business, counseling, and psychology—to bridge the gap between academics and industry by helping individuals and organizations achieve success.

Then on Thursday, Oct. 13 at 10.00 a.m., American IndyCar Series car driver, Josef Newgarden will share fascinating stories on the inner workings of a professional racing program and highlight lessons learned regarding communication and teamwork on his path to the top tier of American Motorsports in his keynote, *The Road to Success*.

Newgarden, a full-time driver for Team Penske, has emerged as one of the true stars of INDYCAR, producing on the track and helping to attract new fans to the sport. Newgarden’s skills and hard work have produced series titles in both 2017 and 2019, along with 22 career victories that make him the winningest active American driver in INDYCAR competition.

“I’m very excited to join METALCON in Indianapolis this fall,” said Newgarden. “Motorsports is often viewed as an individual sport, but on-track success isn’t possible without the support of the people around you. I’m looking forward to sharing some insights from my perspective as to how communication and teamwork from the racetrack translates into day-to-day success away from it.” **MR**



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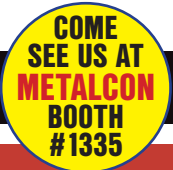
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United States

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Top Tradeshow Honors

METALCON Named Top Tradeshow by Tradeshow Executive Magazine

METALCON, the only global event dedicated exclusively to the application of metal in design and construction, has been named a winner of Trade Show Executive's (TSE) Gold 100 awards, recognizing the top U.S. trade shows.

This prestigious award, facilitated by Trade Show Executive Magazine, recognizes the top tradeshow executives and their shows for setting the gold standard in a tumultuous 2021. The rankings of where each show placed on this coveted list will be revealed at TSE's Gold 100 Awards & Summit next month.

"We are extremely honored and grateful for this special industry recognition," says METALCON Vice President, Judy Geller. "The pandemic presented a whole host of challenges, and our team rose to the occasion working closely with our vendors and venues, as well as state and local government to implement specific safety measures throughout the show, ensuring the safest and healthiest event possible."

In its 32nd year, METALCON is the largest international event in the metal construction and design industry. Each

year, contractors, architects, developers, owners, installers, fabricators, manufacturers and suppliers gather to exhibit the latest products, solutions and game-changing technologies. METALCON features 200+ exhibitors, inspiring keynotes, in-depth workshops and dozens of free educational sessions presented by top industry experts sharing their knowledge with attendees at the show's highly rated education program.

"The accomplishments of the Gold 100 show organizers are a major feat during the ups and downs of the pandemic," said TSE Publisher and Editor-in-Chief Gabrielle Weiss. "Many challenges and new protocols were put before them, and they prevailed. All of us at TSE are excited for them and proud to honor them."

The 100 trade shows, which took place in the U.S. in 2021, were ranked by net square feet (nsf) of paid exhibit space. A collective total of nsf for all 100 shows ranked equaled 19,148,888 nsf, with an average of 191,489 nsf. Total attendance reported for the 2021 Gold 100 winners was 1,297,884. The complete list of this year's Gold 100 honorees is now available.

METALCON will be recognized at



Judy Geller, METALCON Vice President

the TSE Gold 100 Awards & Summit in Santa Barbara, California from Sept. 21-23, which will not only celebrate this year's Class of 2021 Gold 100 winners but will also recognize the industry's robust recovery. **MR**



PHOTOS COURTESY OF MCBOAT PHOTOGRAPHY.

Architect's Experience

Session Addresses Energy Flow In More Efficient Buildings

Benjamin Franklin said, "Investment in knowledge pays the best interest." This year's METALCON offers more than 45 educational sessions at the Indiana Convention Center, Oct. 12-14. Joseph Lstiburek, B.A.Sc., M.Eng., Ph.D., P.Eng., is a principal of Building Science Corporation and an Adjunct Professor of Building Science at the University of Toronto. Lstiburek is METALCON's Opening Keynote Speaker, presenting "*There's No Such Thing as a Free Thermodynamic Lunch – How Changing Energy Flow Changes Everything*" at 8:30 a.m., Oct. 12.

Lstiburek's address is a part of METALCON's Architect's Experience (<https://info.metalcon.com/architects>), "a show within a show" that illustrates how metal can help architects and designers solve their toughest architectural, structural, environmental and building performance challenges. While listed as an event for architects, Lstiburek says there is plenty for contractors and fabricators to learn in this session.

"Contractors will learn how to change their installation practices to compensate for the reduction in energy flow and the change in materials and components," he says. "For example, there are only two kinds of windows in the world: windows that leak and windows that will leak. There are only two kinds of walls in the world: walls that leak and walls that will leak.

"Contractors have to compensate for these inevitabilities. We have to flash everything and flash everything differently, because everything leaks and everything stays wet longer. The contractor mottos have to be, 'if you want to save

cash, flash' and 'don't be a dope, slope.' Easy to say, but not always easy in the field. Details, details and details are a big deal and we often get them wrong at the design stage, where the motto has to be, 'you need a mock-up to prevent a screw-up.'"

So, contractors and architects are invited to join Lstiburek as he delves into the world of energy flow. As the Architectural, Engineering and Construction (AEC) industry significantly improves energy efficiency and moves on from the traditional materials, there are consequences that need to be addressed.

"In the past, buildings constructed with traditional materials that got wet, readily dried, because drying is an energy exchange: more energy flow = higher drying potentials," Lstiburek says. "Today's modern energy efficient buildings have low drying potentials due to their energy efficient products. Therefore, they need low wetting potentials. Current practices are not sufficient to address this and have not adjusted to match modern energy technology."

Lstiburek's address explores what steps need to be taken for current design and construction practices to match the advances of the energy efficient world creating a complete symbiotic energy efficient building.

"Architects are the key," he says. "We have significantly reduced the energy flow across assemblies in order to save energy, which is a good thing. However, there are consequences. The durability of assemblies has been reduced. In the past, assemblies got wet during construction and during service but worked because they were able to dry. We called this incidental wetting. Repeated wetting followed



Joseph Lstiburek, B.A.Sc., M.Eng., Ph.D., P.Eng.

by repeated drying was never an issue. However, drying is dependent on energy exchange. As we reduced the energy flows assemblies stayed wet longer. Incidental wetting was no longer incidental. If you reduce drying potentials, you must also reduce wetting potentials.

"Water management, air management, vapor management becomes more critical. Everything has to change. It gets worse because we are no longer building out of 1,000-year-old trees and rocks. We are building out 'was-wood.' It was wood once, but not anymore. OSB is the 'spam' of wood; 'spam' is the OSB of luncheon meats. Are we going to go back to 1,000-year-old tree and rocks? No. Are we going to go back to energy inefficiency? No. So everything has to change. Architects will learn how to change their design approaches to compensate."

Architects and contractors have an opportunity to get in on the ground floor, so to speak, of this new approach to construction at METALCON. **MR**

DO YOU HAVE A PROJECT TO SHOW OFF IN THE 2023 METAL ROOFING IDEA BOOK?

In addition to advertising opportunities, **The Idea Book** offers the chance to show everyone what you can do as a roofer or supplier. If you have a nice metal roofing project you'd like considered for inclusion, we're looking for finished projects, with information about the building, the roof, and the products used in its construction. If your project or product makes it into the magazine, you'll have bragging rights for all your promotional materials!

May Issue
METAL ROOFING
MAGAZINE

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**PROJECTS DUE
FEBRUARY 15, 2023**

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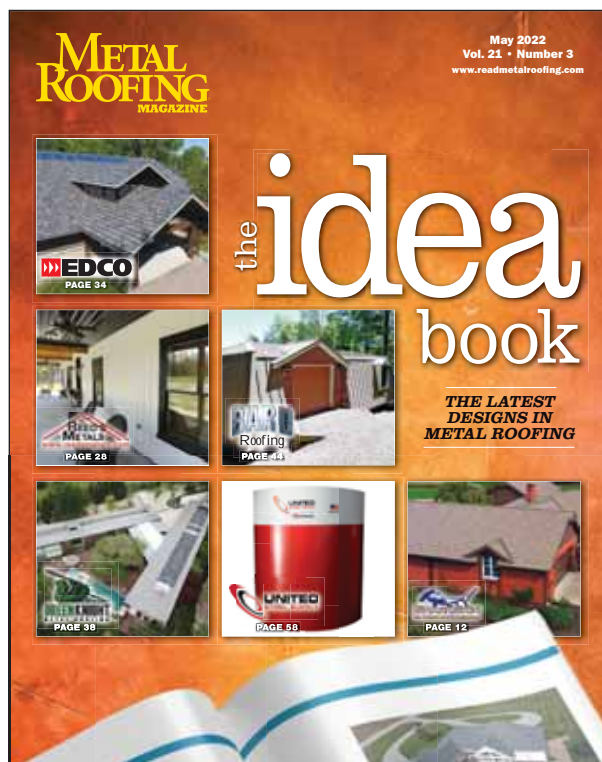
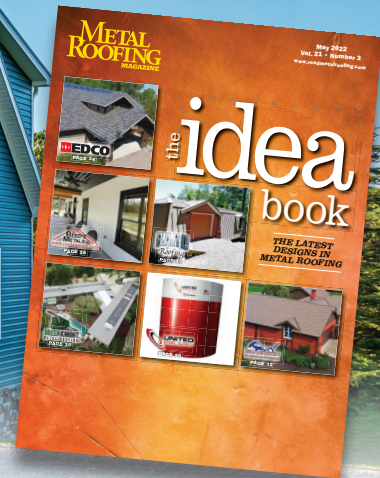


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Do you have a special building project to share? Show readers what you can do!

We are on the hunt for special building projects to be considered for inclusion in our annual Idea Book.

The Idea Book is a special issue of *Metal Roofing Magazine* that features unique projects ranging from equine facilities to courthouses, schools to residential houses. The publication is sent to *Metal Roofing Magazine* subscribers, as well as distributed at industry trade shows.

The Idea Book will take into consideration: projects featuring metal as the main roofing material, to serve as inspiration for architects and builders.

What we are looking for from you is your best project, preferably one that has not already been featured in an industry trade magazine. If your project is chosen, you can use it as bragging rights to show prospective customers!

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Thank you in advance!

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Building type (home, school, etc.): _____
Roof size: _____
Location: _____
Architect: _____
Contractor(s): _____
Installer(s): _____

Roofing system manufacturer (if applicable):

Roof panels: _____

Coating: _____

Ventilation: _____

Fasteners: _____

Snow/rain management: _____

Underlayment: _____

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Other: _____

PRODUCTS USED

General description of the project:

(what did the customer want; what special elements set it apart; etc.)

GENERAL DESCRIPTION