

MBCEA News

Vol 24

February 2015

**Dear Sasha,**

I want to take this opportunity to personally acknowledge all the hard work and effort that went into the approval of AC478. What is that, you ask? Formal, world-wide recognition of a standard to which quality contractors and erectors can aspire, be measured and held accountable. This game-changer will level the playing field. So how did we do it? Let's stroll down memory lane:

During Conference 2013 a question was raised at the round table: what means is there to certify ourselves; to prove that we have the training, processes, people, etc. to assemble a building properly?

How do we distinguish the "good guys" from the "rascals"? Tula Thompson from Bay Insulation and Erin Sullivan from Chief were drafted to help address this issue. Joining their team were Andrew Logue, Chief, Ben Ferguson, Pacific Insulated Panel, Anthony Diver, Tamora, Josh Quinter, Kaplin Stewart, Orris Schlabach, Northeast Erectors and Fadel Alsoudi, Evans Building.

Think about it; this is a perfect example of the power of the MBCEA. Members coming together for the good of membership and industry! This group laid the ground-work, did the research. They reported that accreditation is used worldwide to verify the competence of companies and organizations. Accreditation involves a formal assessment performed by a third-party (accrediting organization) to determine if a company or entity has demonstrated competence and meets specified requirements to perform specific tasks. They also identified the International Accreditation Service, Inc. (IAS) as a highly respected company that already had a program in place for the Metal Building Manufacturers (AC472)

The first team had delivered, and delivered big! They connected us with Sandi McCracken, Programs Manger at IAS. Sandi currently manages four accreditation programs for the IAS. She was instrumental in the development of the most recent accreditation programs for steel construction and has been directly involved with structural steel fabrication for over 35 years, predominately in Quality Assurance and Quality Control.

Next we needed a Technical Committee to draft the actual criteria. It was our specific intent to not set the bar so high that only the elite, large firms could apply nor so low that



Conference 2015 April 30 - May 2, 2015



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Conference 2015 has a fabulous line-up of educational classes and discounted prices so you can bring your key team. Read our [latest article](#) in Metal Construction News for more about this, but be warned, you do not want to miss out!

the program was meaningless. We also knew it was important that we have a cross-functional team representing all facets of industry. Tim Seyler, S&S Structures agreed to chair a team consisting of Tom Frahm, Butler Manufacturing, Wes Young, NCI Building Systems, David Bergholz, Chief Buildings, Eric Kay, Thomas Phoenix International, Inc., Stephen Moore, MMS Northeast, Ryan Grouws, CHG Buildings Systems, Mark Bailey, MarKim Erection Co., Kurt Ives, American Buildings Company, and Mike Reynolds, Systems Contractors. I also tapped Jackie Meiluta who had previously helped me with the Apprenticeship program.

Since last February, this team met weekly and crafted a standard to which we all can be very proud. They labored over sentences and wording to ensure a quality document. Jackie and Sandi kept the team focused. Together this group delivered an excellent product.

Tom Gilligan, Butler , Ken Buchinger , MBCI, Sheryl Cattau, Behlen Building Systems, Erin Sullivan, Chief Buildings, Martin Harper, Chief Buildings, Kenny Waugh, Ironworker Management Progressive Action Cooperative Trust (IMPACT), Tula Thompson, Bay Insulation, Dave Volk, American Buildings Company, Chuck Haslebacher, Varco Pruden Buildings, and Matthew Threadgill, BlueScope Construction, Inc. joined me as a Review Committee. Our job was less time-consuming but no less important.

By August, it was ready! Many thought it could not be done. Many thought it would take years. But the power of the MBCEA delivered! Tim Seyler, Jackie Meiluta and I presented our program to Sandi's management team at IAS. We agreed on a schedule for the next few months that involved trial and tweaking. On December 6, 2014 the IAS announced to their world-wide audience that our program would be considered for approval on February 9, 2015.

Due to health issues I was unable to attend that meeting but again the team came through: Mike Reynolds, Tim Seyler, Mark Bailey, Dave Bergholz, Kenny Waugh, Tom Gilligan and Jackie Meiluta joined Sandi McCracken in Los Angeles. Lee Shoemaker and Dan Walker of the MBMA also came to bolster the program. I was able to attend via webcast and was on the seat of my chair the entire day. Tim Seyler summarizes the days events in the next column.

When it was finally over I yelled "WWWHHHOOOPPPEEEEE!" But in all seriousness, I am so very appreciative of everyone involved. This is a major accomplishment for the MBCEA and for the men and women that are proud to make a living assembling metal buildings. I have said it before, this is a game-changer!

In closing, I hope to see you at the MBCEA Conference in San Diego. I assure you, you don't want to miss it.

Now is the time to prepare your Building of the Year Entries. This prestigious award is available for buildings completed after 1/1/14 and include the categories of Aviation, Education, Innovative Thermal Barriers, Manufacturing, Recreational, Religious, Specialty, and Warehouse. New this year, all entries will be automatically entered into MCN Awards if you choose the appropriate category at the bottom of the form.

A word for our sponsors: you don't want to miss out either. This will be big! We have the following opportunities left:

- Breakfast Buffet (Fri 5/1): \$2,000
- Breakfast in Exhibit Hall (Sat 5/2): \$2,000
- Golf Hole Sponsorship (Thurs 4/30): \$150

[Pioneers Club](#)

Please submit the name of a colleague or yourself for selection to the MBCEA Pioneers Club.

The distinct purpose behind the creation of this important Pioneers Club is the association's determination to give credit and recognition to metal building contractors and erectors who have been such for at least 25 consecutive years.

Welcome New Members

Sincerely,

Gary T. Smith
President, MBCEA



Typical Gary T. Smith - taking on a Bear!

Dear Sasha,

On Monday, February the 9th, representatives of the MBCEA Accreditation Committees including; Jackie Meiluta, Mike Reynolds, Mark Bailey, Dave Bergholz, and myself, were joined by Tom Gilligan, President of BlueScope, along with Lee Schumacher and Dan Walker of the MBMA, and Kenny Waugh, of IMPACT. Together, we



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presented our program to the Accreditation Committee Members of the International Accreditation Service (IAS) in Los Angeles, California.

The IAS Accreditation Committee is populated with 11 members who represent Engineering and Code Officials from around the world. The presentation to their Committee began with an opening and review of the program by Sandi McCracken, the Program Manager for IAS who has guided us through this process. Sandi explained that this new program would complement an existing program AC472, which had been championed by the MBMA.

Jackie Meiluta then followed with an MBCEA Presentation, summarizing the industry need for the program. At that point, the Accreditation Committee then allowed for individual comments from our group, to further describe and support the program.

Lee Shoemaker presented constructive feedback. He helped further refine and clarify not only the program but the ultimate title.

Mike Reynolds spoke next. He was questioned why if no agency or official body was forcing this, would we want to do this. He answered humbly and from the heart that this was something he had wanted for many years. Our industry has a bad reputation; this program is a first step to turn that around. This program is essential to identify the quality erectors from the low-bidders who deliver a substandard result. The Committee seemed impressed. They asked several more questions.

I had the opportunity to take the microphone next. I was able to expand on Mike's comments. Our industry is somewhat unique so I also took this opportunity to explain the metal building assembly industry - the role of the manufacturer, GC and subs.

Kenny Waugh stood up and expressed his support of the program. He stated the ironworkers not only support the MBCEA efforts for the Accreditation program but are also committed to working with the MBCEA to make the program a reality.

Mark Bailey spoke last. He fielded a few more questions and proudly summed up what we all were feeling: this program is the right thing; it will be good for the industry and good for business.

Raj Nathan, VP Operations for IAS formally acknowledged Gary Smith's contributions and the hard work of the MBCEA. Chuck Ramani, IAS President commented on the relevance of the MBCEA bringing this program to the IAS; that we should be applauded for our vision and foresight.

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Carolinas Chapter

SAVE THE DATE

Carolinas Chapter Summer Meeting

Date: June 25-28, 2015

Location: Hilton Head Marriott Resort & Spa
1 Hotel Circle, Hilton Head, SC 29928

Registration & additional details to follow

Please make plans to attend!

Rocky Mountain Upcoming Events

OSHA 10 class at Miller Safety February 19th and 20th. Cost for MBCEA members will be \$200 each for the first 4 employees a company sends and \$100 for each additional Employee. Non MBCEA members - \$250/pp

Clay Shoot Tournament June 19th 8 am at Kiowa Creek Sporting Club.

For more information, to get involved or to register for either of these events, please contact Gerard (Harvey) Freeman at

Prior to the formal vote, the IAS Committee Chairman, Thomas Phillips, who is also the chair of the State of Oregon's Building Codes Division, thanked those who presented. He commented that our presence, and input to the committee, was pivotal in enabling the committee to fully understand, and therefore support this program. Lastly, there was a formal motion to accept the recommendation of Sandi McCracken and authorize AC478 with an effective date of 7/1/15. **All members of the committee voted AYE and we were approved.**

The day will be remembered as a milestone day, with the acceptance and approval of our Accreditation Program for Metal Building Assemblers, by the International Accreditation Service (IAS).

Thanks to everyone who participated in the Technical and Review Committees, and those who submitted letters in support for the Accreditation Program, to the IAS!!

Thanks to the manufacturers who have embraced this effort by supporting their team members who have aided in the process.

And thanks to Lee and Dan of the MBMA, who offered valuable, credible support and insight for the IAS committee.

And, a special thanks to our MBCEA President, Gary Smith, who has been a tireless driver in pursuit of this objective!! I hope his heart did not endure too much stress, while watching the webcast event from home!!

And now, the real work begins!

The purpose of the past year has been to create an Accreditation Program for our industry. It will only succeed and have purpose, once we begin to develop our firms, and assist others, to achieve the standards established in the program, leading to... Accreditation of your company!

I plan to see you all at the Annual Conference in San Diego. There we will present the program, and begin the process of establishing the methods to assist firms in achieving success in obtaining Accreditation.

Sincerely,

Tim Seyler
President, Metal Buildings Institute
Chair, Accreditation Technical Committee
President, S&S Structures

freeman@coloradoprosteel.com

New England News



Please join us on Thursday February 12th in Woburn, MA as we welcome Bill Beals of Therm-All.

Bill will be reviewing the new Energy Codes for us.

Please find attached your [reservation form](#), kindly fill out and e-mail back by Monday February 9th.

Thank You, and hope to see you all there!

Steven R. Webster
MBCEA-NEC President

Mid-West News

We plan to offer a training session in Kansas City in March. Official date and location will be sent out ASAP. The day will cover:

- Training on all new leading edge information standards
- First Aide
- CPR

Accreditation Update

AC478 has been approved with an effective date of 7/1/15. The goal of this program is to level the playing field for *the good guys*.

Accredited entities will need to demonstrate that they have the personnel, organization, experience, knowledge, quality procedures and commitment to assemble metal building systems in accordance with specified requirements.

This accreditation will provide a benefit to the public by helping to identify contractors who are committed to quality workmanship. Accredited Assemblers will be able to market themselves as having achieved the qualifications of a contractor specialist in the metal buildings industry.

To read the complete criteria - [click here](#)

We are planning a year of training and information sessions. Mike Reynolds, Jackie Meiluta and Sandi McCracken will present this program at the IMPACT Conference next week.

In March, Jackie and Gary T. Smith will present at Behlen Buildings National Sales Meeting.

The program will be presented in greater detail at the MBCEA Conference. Chapter training will follow.

If you are interested in learning more or scheduling a training session, contact [Jackie Meiluta](#)

The Code Man's Top Tips for Understanding Commercial Energy Codes and Metal Buildings - Part 3

Members: \$60 Non-members \$80

Lunch is included

Contact [Shannon Fowler](#) for more information.

Mid-Atlantic



Join the discussion on MBCEA's LinkedIn page



Just Relax it's just.....Thermal Stress!

By Arnold Corbin,
Metl-Span

Thermal Stress can be scary the first time you learn about it.

Mention it and you hear all sorts of horror stories. It has been the bane of the metal panel industry since the first metal panels were installed. Having knowledge of thermal stress is essential for anyone in the metal construction industry, especially if you are working with insulated panels.

So what is thermal stress? Let's start with the basics.

When metals are heated they expand, and then contract when cooled. Thermal expansion or contraction is a normal characteristic of all metals. As long as the metal is not restrained, there is no stress. But when it is restrained (i.e., when a panel is attached to a structure), the

A lot of commercial energy code changes occurred in 2014, and it's important that you're aware of them, since they will affect your projects in 2015. Here's a synopsis of all the import code changes you need to know about.

ASHRAE 2013 Standard and IECC 2015 Commercial Code Published

The latest editions of the ASRHAE Standard (2013) and the IECC Code (2015) have been published. Maryland is the first state to adopt IECC 2015. While other states have yet to adopt the newest requirements, they will inevitably be implemented during future cycles.

Changes pertain to increased energy efficiency and extended flexibility and usability of the Standard / code. For example, door and window performance requirements (heating efficiencies) have been increased, as have a few building envelope performance values.

One of the more important changes that will affect a large number of new projects includes U-Values that will not allow a screw-down roof to meet IECC 2012, ASHRAE 2013, or IECC 2015 with fiberglass. A standing seam roof with thermal blocks must be used in the future.

Also, per the ASHRAE 2013 Standard, if the purlin space is under 52 inches, there's a reduction you must take in the U-value in the overall insulation system. This was the first reduction mentioned for metal buildings for purlin spaces under 52".

Changes by State

The following states have adopted IECC 2012 or ASHRAE 2010 in the last 12 months:

- Illinois
- Iowa
- Kentucky
- Massachusetts
- Mississippi
- New York
- North Dakota
- Oregon
- Rhode Island
- Utah
- Virginia
- Washington State (state-specific code modeled after IECC 2012)

metal can no longer move freely and stress happens. That stress is caused by the changes in the temperature on the restrained metal, hence the term Thermal Stress.

All metal panels experience thermal stress, but not all panels experience it in the same way. Single skin panels and insulated panels experience thermal stress differently. When single skin panels that are attached using fixed connections (through fasteners) experience thermal stress, the panel will bow between the fasteners. This bowing is the panel's method of relieving the thermal stress. The common industry term is Oil Canning.

Insulated panels have two metal faces bonded to an insulating core. As the exterior metal face warms it will expand, even though it is bonded to the interior face by the insulating core. The insulated core keeps the interior face at a cooler temperature, which means the interior face does not expand. The expansion in the exterior face causes the panel to bow, even when it is not attached to a structure. This bowing is how the insulated panel relieves thermal stress, and is called Thermal Bow. While insulated panels will not grow or shrink like a single skin panel, thermal bow and stress are normal and expected in insulated panels.

All insulated panels experience thermal stress, there are some ways to help reduce or minimize the effects on your panels both prior to and after installation.

In some cases you might see obvious signs of thermal bow before it is even installed. After the panel has been attached to the structure's frame, it will flatten to the alignment of the structure. Sometimes, however, the thermal bow is significant and can cause difficulty with installation. This kind of significant bowing is

Every state has a code cycle change ranging from 2-4 years. If a state code cycle change is due, it will most likely update to ASHRAE 2010/IECC 2012. The Department of Energy has set a minimum standard of ASHRAE 2010.

For more information, visit my blog [here](#), which is solely dedicated to commercial energy code updates.

About Bill Beals

Bill Beals, District Manager of Therm-All Insulation, is a 28-year veteran of the metal building industry. Bill is a contributing member of several committees, including the Metal Building Manufacturers Association (MBMA) Energy Committee and the National Insulation Association (NIA) Laminators Committee. Bill also belongs to the International Code Council (ICC) and is often invited to share his extensive energy code knowledge through presentations at industry conferences, most recently including The 45th Annual Metal Building Contractors and Erectors (MBCEA) Conference. Bill has contributed to many articles and reference guides, and authors Therm-All's bi-monthly commercial energy codes blog called "The Code Man".



Got something on your mind, we want to hear from you.

Sasha Graver, Executive Director sgraver@mbcea.org

Gary Smith, President gtsmith@thomasphoenixintl.com

Have content or news to share with your fellow members? Contact Jackie Meiluta at jmeiluta@comcast.net

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QUOTE OF THE DAY

normally seen in long, dark colored panels while they are exposed to full sun light. If there is significant bowing, it may be difficult to engage the joint of an uninstalled bowed panel to the joint of an installed flat panel. In most cases just pressing on the bowed panel will flatten it enough to allow joint engagement. If pressing the panel does not work, leaving the panel covered until the last moment or turning the exterior face away from the sun will relieve the thermal bow.

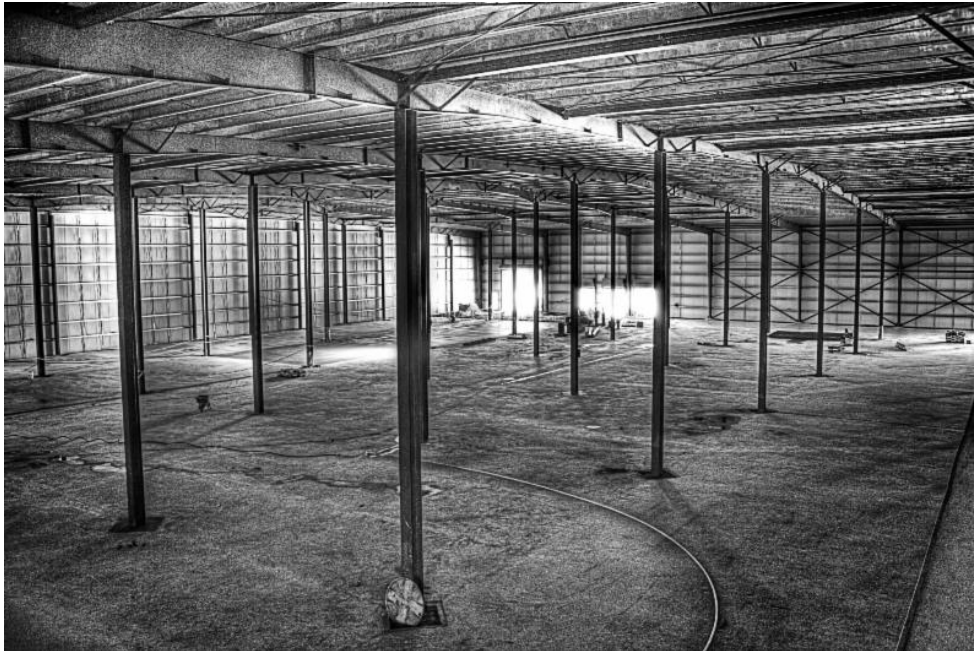
The way the steel frame is erected is important and affects how the panels function, especially if there is thermal stress on the panels attached to the frame. Framing alignment directly impacts how panels react to thermal stress. The key is to avoid framing alignment that causes the panel to bow inward toward the building. Panels attached with an inward alignment that experience thermal stress can exhibit rippling (oil canning), bucking, or core shear. Bucking and core shear are signs the panel has been damaged. Panels can be installed and initially look fine, but later as they begin to experience thermal stress begin to oil can. If this happens immediately check the framing alignment and adjust the girts or studs if possible.

Insulated panel manufacturers publish tolerances for framing and, in most cases, misalignment can be addressed using shims or adjusting the girt or purlin outward. In a perfect world, all of the steel would be fabricated and installed to a zero tolerance. However, manufacturers realize the reality of as-built conditions, and have built in tolerances for normal framing misalignment. It is critical to follow the alignment recommendations from your insulated panel manufacturer.

Other installation factors can affect how a panel reacts to thermal stress, such as over-driven through or clip fasteners and field cutting

"Teamwork is the ability to work together toward a common vision. The ability to direct individual accomplishments toward organizational objectives. It is the fuel that allows common people to attain uncommon results."

Andrew Carnegie



processes. If a panel is cut, the amount of material removed from the panel can change the panel performance. Again, following the manufacturer's installation guidelines will help in avoiding these issues.

The best time to deal with thermal stress is during design and before you have ordered your panels from the manufacturer. You can limit some thermal stress when designing the building. While we can't change the laws of physics, we can manage them. The concept of limiting thermal stress seems simple, but the approach can be complex. Some fundamental considerations to think about when choosing panel materials include:

- the panel length,
- the color, and
- the interior temperature of your building.

Panels that are longer in length or darker in color tend to experience thermal stress greater than shorter or lighter color panels. The greater the difference between the interior and exterior temperature of your building increases the chance that thermal stress will occur.

There are ways to manage thermal stress, but the approach will be different depending on the panel type and application. Design tools that will help to manage thermal stress are increased gages, profiled panel faces, lighter colors, and shorter and/or narrower panels. For example industrial buildings normally use profiled panels, which overcome the stresses in long lengths and darker colors. In most cases the profiling of the panels is enough to manage thermal stress. If you plan to use an architectural flat or minimum-profiled panel, using heavier gages and shorter or narrower panels can help minimize thermal stress.



How do you know if you are using the correct panel? Let me help alleviate some of your fears about choosing the right panel. Insulated panel manufacturers have helped you out by increasing the gages and placing length limits on architectural flat or minimum-profiled panels. They also will provide application guidance for the various panel types. All you have to do is ask.

Reduce your (thermal) stress by reading the installation guides, checking the framing alignment, and making adjustments if necessary. Call the manufacturer if you have questions or concerns about whether your panels are stressing out.

[Click here for a copy of this article that includes graphics](#)



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Interested in becoming a member of the MBCEA? Join today and receive a free set of the Quality and Craftsmanship DVD series at no charge. This series is normally \$500 (\$350 for members) and well worth every penny!

Offer Expires: January
February 28, 2015 (while supplies last)

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