TOP STORIES

Group B Hearings at ICC Provide Positive Results for CFS
The Group B International Code Council (ICC) Hearings were held in Dallas, Texas from April 23-29, 2013. The main codes of interest to the cold-formed steel (CFS) industry were the International Energy Conservation Code (IECC) and the International Residential Code (IRC). More

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COLD-FORMED STEEL ENGINEERS INSTITUTE – NEWS AND UPDATES

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Engineering Students Take on New Challenge in International Cold-Formed Steel Design Competition
AISI Co-Sponsors Third Annual Competition. More

MARKETPLACE

U.S. Manufacturing Shrinks; Construction Spending Up
U.S. manufacturing activity contracted in May for the first time in six months as new orders slipped and there was less demand for exports, a new industry report showed. A separate report showed that U.S. construction spending rose slightly, but fell short of estimates. More

June 1 Implementation of New SP Design Values Imminent
There are a wide variety of groups that have addressed, and will continue to address, the imminent implementation of the new Southern Pine (SP) design values. June 1, 2013, marks the date the Southern Pine Inspection Bureau (SPIB), (under the oversight of the American Lumber Standards Committee (ALSC)), has established for the revised SP “design” values to become “effective”. More

U.S. Steel Capacity Utilization Tops 79% for Highest Mark Since May 2012: AISI
U.S. steel mill capacity utilization reached 79.5% in the week that ended Saturday, its highest level in percentage terms since May 2012, according to a report released by the AISI on Monday. More
This Housing Upturn Looks Like the Real Thing

Ever since the recovery began in 2009, a weak housing market has held back the U.S. economy. The first rebound in home prices was lackluster and after only a year was followed by another dip. But the recent upturn in home prices looks like the real thing. More

US Lumber Production Growth Outpacing Canada

A survey of Canadian and U.S. softwood lumber producers reveals while North American production was up in 2012, Canada's output was flat. More

HEADQUARTERS

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NEW MEMBERS

- Anthony Augustine
- AR Engineers
- Bahnu Green Construction LLC
- Crafton Tull
- GaMa Enterprises
- Healthy Buildings Construction Group
- J3 Engineering Group, LLC
- John Gobieski
- John S Deerkoski, P.E. & Assoc.
- Kara Peterman
- PinnacleLgs
- Sage Engineering
- Swindale Associates Ltd
- Syntax Engineering
- V. Paulius & Associates
- Vstahl Infra Projects Pvt. Ltd.
**TOP STORIES**

**Group B Hearings at ICC Provide Positive Results for CFS**

The Group B International Code Council (ICC) Hearings were held in Dallas, Texas from April 23-29, 2013. The main codes of interest to the cold-formed steel (CFS) industry were the International Energy Conservation Code (IECC) and the International Residential Code (IRC). The proposals were heard by three different committees – one for the IRC Building Committee, one for the IECC Residential Energy Committee, and one for the IECC Commercial Energy Committee.

**IRC Building Committee**

There was one high-priority issue under consideration in the IRC.

RB 389 is a joint SFA proposal with the Foam Sheathing Coalition (FSC) to introduce prescriptive requirements for siding attachments to steel framing through foam insulation. This was considered a high-priority issue due to the recent upgrades to energy requirements that left a void in the code. A similar proposal was approved for the International Building Code (IBC) in 2012. The IRC proposal was accepted with a small modification that eliminated a column in the proposal that is covered elsewhere in the code. If this proposal is approved as part of the consent agenda at the final membership hearings in October, then CFS will have solutions in both the IRC and IBC, a big win for steel.

SFA also supported multiple AISI proposals (Proposals RB258, RB330 and RB400) to streamline the prescriptive provisions for CFS in the IRC and to add COFS S200 and S220 (proposal # RB350) as reference standards. All of these were approved.

SFA opposed several proposals that had the potential to negatively impact CFS, while supporting others that would be beneficial.

**IECC Residential Energy Committee**

SFA submitted a proposal, RE180, at the hearings to reintroduce mechanical equipment efficiency into the code as a trade-off for foam insulation. The wood industry, concrete industry, National Association of Home Builders (NAHB), and other builder groups submitted similar proposals. This was one of the most hotly debated topics at the hearings, with substantial opposition.

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Before the hearings, SFA met with these other proponents and agreed to support RE166, which was similar to RE180, achieved the same objective, and was the first proposal to come up on the agenda. In exchange for support of RE166, SFA agreed to disapprove RE180.

Another important opportunity was presented to us through a proposal (CE66) to introduce a tropical climate zone into the code. This proposal had a second part that included a deemed-to-comply provision for buildings in this zone. The deemed-to-comply provision exempts compliance with the existing envelope provisions that create a disadvantage for CFS in Hawaii and other hot, humid climates. CE66 won’t completely address the issues faced by CFS in Hawaii, but it will exempt many buildings there, a positive outcome for our industry. CE66 was approved by the committee despite strong opposition. SFA and local building officials were in the minority in voicing support, but our arguments were persuasive in demonstrating the need for these provisions. Although CE66 was approved by the residential committee, it was disapproved by the commercial committee, which will likely draw public comments to reverse the decision of one of the committees. We will continue to monitor this situation and work with other proponents to keep the residential committee’s decision intact.

As with the IRC building hearings, we also opposed multiple proposals by other organizations that had the potential to negatively impact CFS, and supported some that would be beneficial.

IECC Commercial Energy Committee

This topic was the major focus of our efforts in that it included a series of proactive proposals to better position CFS in the IECC commercial section. SFA submitted seven proposals. Two of them that were originally in a single proposal were split up into separate proposals for different climate zones. Prior to the hearings, we decided to withdraw two proposals due to resistance from allied organizations within and outside of the steel industry, leaving the five below to present to the IECC Commercial Energy Committee. Rather than withdrawing the two proposals (CE72 and CE78), we asked for disapproval in case we decide to resubmit them as public comments.

- CE85 was designed to preserve the U-factors for CFS contained in ASHRAE 90.1, Appendix A. These U-factors are the most favorable to CFS of any currently being used. Several influential 90.1 envelope subcommittee members have voiced concern that these values for CFS need to be updated to be more conservative. To counter this potential threat, CE85 introduced the same equation used in 90.1 into the IECC. The proposal was unanimously approved by the committee.

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- CE104 was designed to gain recognition for ASTM 1363 (Hot Box Testing) and allow users to vary the hot box test results to add or subtract the R-values of continuous insulation. This will greatly reduce the number of hot box tests necessary to address gaps in available data for CFS. This proposal also added language that allows the ASHRAE 90.1 U-factors to be used for assemblies with different cladding systems. In the current code, the language limited use of these U-factors to walls built exactly as stated in 90.1 (only walls with a stucco finish). CE104 was approved by the committee. There was no opposing testimony.

- CE107 and CE108 were originally a single proposal, but were split into two to increase the chances of approval. They attempted to eliminate continuous insulation on framed walls in Climate Zones 1 and 2 (CE107) and Climate Zone 3 (CE108). CE107 was heard first. There was both considerable opposition and support expressed by the audience, although the main issue from the committee seemed to be that we only changed the R-values and not the corresponding U-factors. CE107 was disapproved. We subsequently asked for CE 108 to be disapproved so that we could bring both proposals back at the second hearings with modified U-factors.

- CE 344 was a proposal to test the acceptance of using a standard building design as opposed to the actual building design for compliance with the performance option. This would allow the steel industry to develop alternative prescriptive solutions to those in the code that currently rely almost exclusively on continuous insulation to comply. Before CE344 came up on the agenda, we received considerable input from opponents that the language was too broad and needed to be tightened up to prevent abuse. We developed a modification to address most of the issues that were raised. However, the committee chair ruled the modification out of scope and it was never heard. We subsequently asked for disapproval to bring it back at the second hearings with the modified language inserted. A representative from the major opponent (The Energy Efficient Codes Coalition) agreed to work with us on the language, but stopped short of committing to support of a public comment.

For more information on ICC Group B Hearings results, please contact Maribeth Rizzuto at MSRizzuto@aol.com.

- Editor, Framework Online
TOP STORIES

Life Cycle Inventory Study Underway

The Steel Market Development Institute (SMDI) and Steel Framing Alliance (SFA) entered into a contract with PE International, Inc. to develop a life cycle inventory (LCI) for the production of cold-formed steel studs through the roll forming process. This is a necessary first step that will assist us in moving forward with other environmental performance metrics—including Life Cycle Assessment and Environmental Product Declarations—that are being codified in building codes and rating systems such as the National Green Building Code (ICC-700), the International Green Building Code, and Leadership in Environmental and Energy Design (LEED).

The creation of this gate-to-gate LCI project began with a workshop on May 20 for SMDI and SFA staff and member company representatives. The purpose of the workshop was to review the project objectives and desired outcomes, identify the data collection requirements, and develop a collective strategy. PE International representatives explained the data collection process and provided some customized templates that will be completed by the companies.

The project is being fast-tracked for completion by the end of this calendar year.

- Editor, Framework Online
TOP STORIES

Did You Know That Wood is Not Renewable???????

That’s right! At the recent ASTM E-60 meetings held in Indianapolis, Indiana, attendees discussed the various definitions for the term “sustainability,” with the primary focus that for a product to be classified as renewable, it must have no human intervention. If that’s true, then all of those tree farms used to produce the wood for construction should lose their renewable classification. In addition, the committee bounced around a new term—“neutra-newable” — to cover those materials that are classified as non-renewable but have characteristics like infinite recyclability. That’s steel! Proponents of the new term argued that it is unfair to penalize materials that continue to be replenished through the process of recycling without losing their chemical properties or strength. You can be sure that this lively discussion will continue.

- Editor, Framework Online

UPCOMING EVENTS

June 6, 2013
Curtain Wall Design Webinar
3:00 p.m. Eastern More

August 1, 2013
Inspection Checklist for Mid-Rise CFS Framing Webinar
3:00 p.m. Eastern More

October 1-3, 2013
METALCON International
Georgia World Congress Center
Atlanta, GA More

October 3, 2013
Back-to-Basics – A Review of AISI S100 Compression Member Design Provisions Webinar
3:00 p.m. Eastern More

December 5, 2013
Cold-Formed Steel Related ASTM Standards Webinar
3:00 p.m. Eastern More
CFSEI To Host Webinar On Cold-Formed Steel Curtain Wall Design on June 6, 2013

CFSEI will host a webinar on “Cold-Formed Steel Curtain Wall Design” on Thursday, June 6, 2013 at 3:00 PM Eastern Time. The webinar will cover stud design, top track design, design of openings, bridging and other topics. Example calculations covering studs, top track, connections and openings will be provided. Participants are eligible for 1.5 continuing education units.

The webinar will be based on information contained in AISI S100, North American Specification for the Design of Cold-Formed Steel Structural Members; AISI S211, North American Standard for Cold-Formed Steel Framing – Wall Stud Design; and various CFSEI Technical Notes.

The presenter is Sutton Stephens, Ph.D., P.E., S.E., chief engineer at Pacific Northwest Engineering, Inc. Stephens has 28 years of experience in the structural engineering field. He has also taught structural engineering courses at Kansas State University and has authored several research papers. He is a member of the American Iron and Steel Institute (AISI) Committee on Framing Standards and chairs its Prescriptive Methods subcommittee. He served on the CFSEI Executive Committee for two years.

More information on the webinar and registration details are available at www.cfsei.org.

- Editor, Framework Online
2013 CFSEI Expo Lands in the City by the Bay

With more than 100 architects, builders/contractors, engineers and other construction industry professionals in attendance, the 2013 CFSEI Annual Expo and Meeting provided attendees with 16 top-notch educational seminars along with many quality networking opportunities.

A highlight of the conference was the luncheon address by John Moebes, director of construction for Crate & Barrel, who described the methods and needs of his organization and its construction process. With ongoing projects around the world, John spoke of the success that Crate & Barrel has had over the years with cold-formed steel. “It is only with cold-formed steel that we have been afforded the opportunity to achieve our signature one-of-a-kind buildings, and we look forward to continued innovation in the cold-formed steel industry to meet our needs going forward,” he said.

Additional presentations covered topics such as lateral design, curtain walls, testing and analysis of steel framing members, and technical notes, allowing the Expo to issue more than 350 hours of continuing professional development hours (PDHs).

Throughout the two-day event, participants were invited to immerse themselves in state-of-the-art innovations, technologies and principles in cold-formed steel framing at the Expo, where 12 companies had set up exhibits. CFSEI gratefully acknowledges Aegis Metal Framing and ClarkDietrich Building Systems (the Platinum Sponsors of the event); Simpson Strong-Tie Company Inc, TrusSteel, hsbSteel, CEMCO, and MarinoWare (the Gold and Silver Sponsors, respectively); and Keymark, Strucsoft, Argos, The Steel Network, Precision Structural Engineering, Inc, and PACO Steel and Engineering (the Bronze sponsors) for their participation and support in the Expo. Thank you!

Plenty of networking opportunities were available through the seminars and Expo, but the favorite was a relaxing dinner cruise to take in the skyline of San Francisco, presenting numerous examples of the beauty and innovation provided by cold-formed steel design.
At the conclusion of the Expo, attendees received certificates for their respective professional development hours and a special username and password to access Expo presentation slides on the CFSEI website, www.cfsei.org. They were also asked to fill out and submit an evaluation form for the event by June 30, 2013. The evaluation will help CFSEI staff evaluate what worked, what didn’t, and topics that should be considered to make next year’s conference even better. Participants are also being asked to recommend venues for next year’s event. Responses can be sent to conference@cfsei.org.

Many thanks to the West Chapter of the CFSEI for hosting the 2013 CFSEI Annual Expo and Meeting, which is the only event of its kind dedicated to the cold-formed steel framing industry.

- Editor, Framework Online

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- Bahnu Green Construction LLC
- Crafton Tull
- GaMa Enterprises
- Healthy Buildings Construction Group
- J3 Engineering Group, LLC
- John Gobieski
- John S Deerkoski, P.E. & Assoc.
- Kara Peterman
- Pinnacle
gs
- Sage Engineering
- Swindale Associates Ltd
- Syntax Engineering
- V. Paulius & Associates
- Vstahl Infra Projects Pvt. Ltd.
CFSEI Announces 2013 Design Excellence And Construction Innovation Award Winners

CFSEI announced the recipients of its Design Excellence and Construction Innovation Awards during the 2013 CFSEI Annual Expo and Meeting held at the Hilton Financial District Hotel in San Francisco, California. The awards were presented on May 7, 2013. They recognize outstanding achievement in creative design, technical innovation, and best practices in the use of cold-formed steel framing and are presented in two categories – Design Excellence and Construction Innovation.

The Design Excellence category recognizes small and large projects that exemplify excellence in the structural design of new or renovated structures utilizing cold-formed steel products. The 2013 winner is:

- ClarkDietrich Building Systems, for the Western Connecticut State University Visual and Performing Arts Building.

The Construction Innovation category recognizes the use of an innovative product, process, tool, technique, machine or methodology to advance the cold-formed steel industry. There were two awards presented in 2013 to:

- ClarkDietrich Building Systems, for the use of Blazeframe™ fire-stopping system in a University of Massachusetts Lowell student housing project in Riverside, MA.
- Lakeshore Toltest Corporation (LTC), for construction of the Garraf Oil Field Housing and Support Facilities in southern Iraq.

“Each of these projects presented significant design challenges, and we were impressed with the innovative ways that these challenges were solved,” said Maribeth Rizzuto, LEED AP-BD&C, managing director of the Cold-Formed Steel Engineers Institute. “Congratulations to these project teams, who benefit all of us involved in the industry by advancing the use of cold-formed steel design solutions in the marketplace.”

…Continued next page
About the Projects

Western Connecticut State University Visual and Performing Arts Building (ClarkDietrich Building Systems). This 137,000 square-foot project includes a 350-seat concert hall, 350-seat theater, state-of-the-art rehearsal and studio art facilities. While the size of the building is impressive, it’s the architectural features that made it a unique and complex challenge for the design of cold-formed steel applications including a large mock-up structure, a 96-foot soaring wall, an interior 40-foot plenum, and trapezoidal and triangular windows. “Our work on this project truly represents the best of ClarkDietrich’s offerings. We would like to extend a special thank you to CONN Acoustics in Newington, Connecticut for trusting us with their design needs,” said Robert Warr, P.E., LEED AP, Director of Engineering Services for ClarkDietrich Engineering Services LLC. “It is only with top-quality contractors like them that we are able to receive this distinguished accolade.”

University of Massachusetts - Lowell (ClarkDietrich Building Systems). This new construction build for a multi-story student housing unit needed a product that would allow the contractor to meet a tight turnaround schedule for framing the interior walls, especially the fire-rated assemblies. The contractor selected ClarkDietrich’s BlazeFrame™ system, an innovative new steel framing, fire stop combination product that allows contractors to simultaneously frame and fire seal interior walls. “By using BlazeFrame™, the contractor was able to incorporate several construction steps into one assembly while ensuring a building that is code compliant with a fire-rated wall system,” said Robert Warr. “This provided significant cost and time savings for the contractor, allowing him to save time within a very tight construction schedule.”

Garraf Oil Field Housing and Support Facilities (Lakeshore Toltest Corporation). Cold-formed steel was used to construct air-conditioned accommodation facilities, a project management office, management housing, a dining facility, a recreational gymnasium, and workshops for a fully functional 300-person work camp located in a remote and isolated region in southern Iraq. The workers were constructing an oil field production facility. The camp was constructed with an on-site FrameCAD machine using approximately 100 tons of rolled steel for fabrication and a concrete batch plant. LTC used local workers in the construction of the cold-formed steel buildings and trained them in reading construction plans, using construction equipment, assembling and fabricating steel panels, and the installation of interiors.

…Continued next page
“LTC has a long history of actively supporting the local workforce by hiring and training local workers,” explained Thomas C. Corning, LTC Chief Operating Officer. “By investing in the local workforce, we promote stability at the worksite and help to ensure quality by promoting high standards and continuous improvement in the community.”

The CFSEI award entries were judged on demonstrated excellence and achievement in the use of cold-formed steel based on the following criteria: design creativity, technical innovation, system efficiency and economy, constructability, complexity of problems solved, and design integration. The entries were judged by a panel of five cold-formed steel professionals, including two CFSEI member professional engineers, a professor of structural engineering, a licensed architect, and a licensed contractor.

The Design Excellence and Construction Innovation Awards are presented each year at the CFSEI Annual Expo and Meeting. It’s not too early to start thinking about nominations for next year’s event. For more information, please contact CFSEI at info@cfsei.org.

- Editor, Framework Online

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3:00 p.m. Eastern More

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3:00 p.m. Eastern More

December 5, 2013
Cold-Formed Steel Related ASTM Standards Webinar
3:00 p.m. Eastern More
CFSEI Announces 2013 Distinguished Service Award Winner

CFSEI is pleased to announce Don Allen, P.E., Senior Engineer at DSi Engineering, as the recipient of its 2013 Distinguished Service Award. The award, which recognizes the significant contributions of an individual who has volunteered time, talent and resources to the cold-formed steel industry, was presented on May 7, 2013 during the 2013 CFSEI Annual Expo and Meeting.

“Don Allen lives and breathes cold-formed steel framing, and we are honored to recognize his enthusiasm for our industry and his many contributions to it with this award,” said Maribeth Rizzuto, LEED-AP-BD&C, managing director of the Cold-Formed Steel Engineers Institute. “He has been involved in hundreds of cold-formed steel commercial and residential projects, including his own house, and has also been involved in the development and testing of steel-framed truss systems. He is a true cold-formed steel advocate and is very deserving of this award.”

Allen has been involved in commercial and residential steel framing since 1990. His designs include some of the light steel framing in the Georgia Dome and Atlanta Olympic Stadium, as well as several hundred projects across the United States. He chairs the General Provisions subcommittee of the AISI’s Committee on Framing Standards, and represents DSi Engineering on the AISI Committee on Specifications. In 2006, he was selected to be on the International Code Council’s Evaluation Service Advisory Committee.

For eight years, he concurrently served as technical director for the Steel Stud Manufacturers Association, the Steel Framing Alliance, and the Cold-Formed Steel Engineers Institute. Allen regularly lectures and writes on cold-formed steel design and construction issues for industry publications. He has a special interest in the role of structural materials in sustainable development, is a LEED®-accredited professional, and is a member of the Committee on Sustainability for the American Society of Civil Engineers Structural Engineering Institute.

- Editor, Framework Online
Researchers And Steel Industry Partners Begin First Phase of Testing for Seismic Design of Light Frame Construction
NSF-Sponsored Research to Conclude with Shake Table Testing

A partnership of leading cold-formed steel design researchers from top U.S. and Canadian universities and design professionals from the steel industry have begun the final phase of a three-year research project to increase the seismic safety of buildings that use lightweight cold-formed steel for their primary beams and columns. Funded by a National Science Foundation (NSF) grant, the researchers have already developed a series of computational models to determine how a complete building structure will perform during an earthquake.

The next stage in the testing involves the construction of a two-story structure and testing on a “shake table” at the University at Buffalo. The building will undergo the rigors of a controlled earthquake to determine how it performs. There will be two phases to the shake table testing: Phase One will test only the structural components, which include the cold-formed steel skeleton and the OSB (oriented strand board) sheathing for the floor diaphragm and roof; and Phase Two will add non-structural components like stairs, gypsum sheathing and interior partitions. The objective is to advance cold-formed steel light-frame design in buildings to the next level and equip engineers to implement these performance-based seismic designs in their projects.

The research team is led by Benjamin Schafer, Ph.D., P.E., of the Department of Civil Engineering at The Johns Hopkins University and a long-time member of two AISI standards-developing committees — the Committee on Specifications and the Committee on Framing Standards. Dr. Schafer’s team includes additional researchers from The Johns Hopkins University and Bucknell University, with input as well from colleagues at the University of North Texas, Virginia Tech, and McGill University (Montreal, Quebec, Canada).

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Several steel industry partners are participating in the project, providing technical expertise, donated materials and additional funding. The steel industry partners include the AISI; Bentley Systems, Incorporated; ClarkDietrich Building Systems; Devco Engineering, Inc.; DSI Engineering; Mader Construction Company, Inc.; Simpson Strong-Tie Company Inc.; the Steel Framing Industry Association; and the Steel Stud Manufacturers Association.

One of the important deliverables from the project will be the transfer of the research results into an open source software framework. This data will then be made available to engineers, allowing them to see how their structural system designs will respond to an earthquake before they are constructed. This software will create cost efficiencies and potentially save lives.

Ben Schafer commented that: “We appreciate the valuable technical and economic input that our industry partners have provided. Their role will continue to be critical after the project concludes as they provide technology transfer of the findings to practicing engineers. From a research perspective, we will seek additional opportunities to build on the body of knowledge resulting from this project and utilize the ideas and enthusiasm of the next generation of seismic engineers.”

Graduate student Kara Peterman from The Johns Hopkins University is on-site at the University at Buffalo Structural Engineering and Earthquake Simulation Laboratory (SEESL), and is providing daily updates on the construction of the structure and the testing schedule through blog entries at http://cfsnees.blogspot.com/.

**Project Background**

The award is an outcome of the National Science Foundation (NSF) 09-524 program solicitation for the George E. Brown, Jr. Network for Earthquake Engineering Simulation (NEES) Research (NEESR) competition. The title of the project is “NEES-CR: Enabling Performance-Based Seismic Design of Multi-Story Cold-Formed Steel Structures.”

The analysis and initial testing for the project began in late 2010 and took place at The Johns Hopkins University and the University of North Texas. The focus has now moved to the University at Buffalo, where construction is underway on the two-story test building. An advance team is setting up equipment and monitoring the construction progress. Phase One testing may begin as early as June 10. Full-scale shake-table testing is expected to take place later in the summer.

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For More Information

CFSEI members are encouraged to keep up with the schedule and happenings at http://cfsnees.blogspot.com/ or on the CFS-NEES website at http://www.ce.jhu.edu/cfsnees/. The CFS-NEES website also includes live camera shots from the lab so viewers can follow progress on the construction and testing, as well as more in-depth information on the research.

- Editor, Framework Online

UPCOMING EVENTS

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3:00 p.m. Eastern More
AISI Updates Three Cold-Formed Steel Framing Design Standards
2012 Editions of S200, S201 and S214 Now Available in Steel Store

AISI has published the 2012 editions for three of its cold-formed steel framing standards – AISI S200-12: North American Standard for Cold-Formed Steel Framing – General Provisions; AISI S201-12: North American Standard for Cold-Formed Steel Framing – Product Data; and AISI S214-12: North American Standard for Cold-Formed Steel Framing – Truss Design. The publications are available for purchase at the AISI Steel Store at www.steel.org (click here). Each of the publications contains a description that highlights the changes made since its previous printing in 2007.

“These new editions reflect technological advancements made since the 2007 editions were printed,” said Jay Larson, P.E., F.ASCE, Managing Director, Construction Technical Program. “The advancements are the result of our industry’s ongoing support for research and development. These cold-formed steel framing standards are part of a comprehensive update and reaffirmation effort that we are executing for our complete suite of standards this year. They are intended for use in the United States, Canada and Mexico.”

Source: American Iron and Steel Institute, May 30, 2013
Engineering Students Take on New Challenge in International Cold-Formed Steel Design Competition

AISI Co-Sponsors Third Annual Competition

AISI, the National Science Foundation (NSF), CFSEI, and the University of North Texas are co-sponsoring the third International Student Competition on Cold-Formed Steel Design. The competition is open to all full-time students at either the undergraduate or graduate levels who are interested in cold-formed steel design, creative in problem solving, and eager to learn new technologies. The competition was launched in April and will conclude on September 15, 2013.

The competition is unique in that step-by-step instructions and free software are provided so that any student, regardless of the major area of study, can complete and submit a cold-formed steel design.

“During the first two years, we received such a positive international response to this competition that we decided to extend the submission deadline until September so that more students could participate,” said Jay Larson, P.E., F.ASCE, managing director of AISI’s Construction Technical Program. “Our judges have been impressed with the quality of the solutions offered by the students. This year’s problem focuses on designing an open section shape, with several requirements that will challenge our future engineering workforce to use state-of-the-art design software to come up with a creative steel solution.”

“This competition is a great avenue for students to get to know the beauty of cold-formed steel structures, which is the ‘green’ way of constructing buildings,” Cheng Yu, Ph.D., associate professor at the University of North Texas and the competition organizer, said. “Cold-formed steel allows engineers to produce optimal shapes to accommodate service needs while utilizing a minimal amount of raw materials.”

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The 2013 International Student Competition on Cold-Formed Steel Design is hosted by the University of North Texas and requires that students work on the problem individually, with no team solutions accepted. Participants can view the problem and contest rules at [http://cfscompetition.unt.edu](http://cfscompetition.unt.edu). Students will use an open source CUFSM to perform the elastic buckling analysis to determine critical elastic buckling loads. (CUFSM is software that employs the finite strip method to provide solutions for the cross-section stability of thin-walled cold-formed steel members.)

Students will submit a completed information form, design essay and CUFSM result file by September 15, 2013. A panel of judges will review all entries and announce the winners in December 2013, with awards mailed in January 2014.

The panel of judges is nationally recognized in the area of cold-formed steel design and includes:

- Cheng Yu, Ph.D., associate professor and organizer of the 2013 International Student Competition on Cold-Formed Steel Design, University of North Texas
- Rick Haws, P.E., engineer, NBS Group Services, A Nucor Company
- Roger A. LaBoube, Ph.D., P.E., Distinguished Teaching Professor, Missouri University of Science and Technology
- Yuanqi Li, Ph.D., professor, Tongji University, China
- Yared Shifferaw Bayleyegn, Ph.D., assistant professor, Drexel University

Monetary awards will be provided to the top three winners, and each of the top 10 winners will receive a one-year student membership in the CFSEI. The winning designs will be recognized and exhibited at selected professional conferences. For more information on the competition, please contact Cheng Yu, Ph.D., at Cheng.Yu@unt.edu or 940.565.2022 (Tel).

Source: American Iron and Steel Institute, April 24, 2013
MARKETPLACE

US Manufacturing Shrinks; Construction Spending Up

U.S. manufacturing activity contracted in May for the first time in six months as new orders slipped and there was less demand for exports, a new industry report showed. A separate report showed that U.S. construction spending rose slightly, but fell short of estimates.

The Institute for Supply Management (ISM) said its index of national factory activity in May fell to 49.0 from 50.7 in April, short of expectations for 50.7.

A reading below 50 indicates contraction in the manufacturing sector. The last time the ISM manufacturing index fell below 50 was November 2012, shortly after the U.S. East Coast was hit by a massive storm.

The gauge for new orders dropped to 48.8 from 52.3, while a measure of employment edged down to 50.1 from 50.2. Production fell to 48.6 from 53.5.

The exports index fell to 51.0 from 54.0, while imports held up relatively better, slipping slightly to 54.5 from 55.0.

Though growth has cooled in recent months, before May the national reading had managed to stay in expansion territory, unlike some regional reports that have shown shrinkage.

Economic growth overall in the second quarter is expected to slow from the first quarter's 2.4 percent pace.

Construction Misses Forecast

A separate report showed that business spending pushed U.S. construction outlays slightly higher in April, offsetting declines in projects at private homes and in the public sector.

Construction spending rose 0.4 percent to an annual rate of $861 billion, a smaller gain than the 0.8 percent increase that was expected by analysts polled by Reuters, Commerce Department data showed on Monday.

UPCOMING EVENTS

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3:00 p.m. Eastern
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The department revised March spending to show a 0.8 percent decline, which was a smaller drop than initially reported.

The data supports the view that government austerity is holding back economic growth this year. Public sector spending at construction sites fell 1.2 percent in April, hit by a sharp decline in state and local outlays, which hit a seven-year low.

Also holding back overall spending, private residential construction spending eased 0.1 percent lower. The drop appeared to be led by declines in home improvement spending, as outlays on building homes increased during the month.

Businesses, however, ramped up spending to build utilities, and overall private nonresidential construction spending rose 2.2 percent.

Source: Reuters, June 3, 2013
MARKETPLACE

June 1 Implementation of New SP Design Values Imminent

There are a wide variety of groups that have addressed, and will continue to address, the imminent implementation of the new Southern Pine (SP) design values. June 1, 2013, marks the date the Southern Pine Inspection Bureau (SPIB), (under the oversight of the American Lumber Standards Committee (ALSC)), has established for the revised SP “design” values to become “effective”. As can be seen in the screenshot of the SPIB website, it clearly indicates an effective date of June 1, 2013:

Supplement 13 to the 2002 Standard Grading Rules for Southern Pine Lumber’s cover page text confirms this:

Supplement 13 effective June 1, 2013 (03/08/2013)
Supplement No. 11 (05/01/2012)
Supplement No. 7 (06/01/2012)
The operative word for the implementation of the new SP design values is "effective". So what does "effective" specifically mean? Referring to Dictionary.com, the word means:

**ef-fec-tive** // [ih-fek-tiv] **adjective 2.** actually in operation or in force; functioning: The law becomes effective at midnight.

This means that the professional engineers working for American Wood Council (AWC), Southern Forest Products Association (SFPA) and SPIB have a really big job ahead of them. For the lumber design value change to be truly "effective" on June 1, 2013, the new values have to be applied to all end use applications that resist applied loads using standards, such as the National Design Specification (NDS) engineering mechanics resistance equations.

...Continued next page
These equations form the basis of engineered resistance tables in the International Residential Code (IRC), International Building Code (IBC), AWC’s Special Design Provisions Wind and Seismic (SDPWS), the Wood Frame Construction Manual (WFCM) and so forth.

To be successful in this professional engineering endeavor, the organizations listed above have had from January 30, 2013 to the June 1, 2013 effective date, to ensure that all end use applied load resistance applications are using the newly implemented SP design values. Their largest challenge is that this task includes ensuring that all of the conventional framing engineered applications that use pre-June 1, 2013 span tables/design values (i.e. all IRC, IBC etc. tables) are well-known to no longer be in force or effect. This is a significant professional engineering job.

If they do not accomplish this task, many will fail to meet the SPIB effective date. Yet, so little information has been placed into the marketplace advising of the absolute importance of the effective date, the need to implement the new SP design values by the effective date, and the ramifications if one does not accomplish the changeover.

Are builders and framing contractors, for example, being told that if they build or construct using old design values that they are failing to meet the lawful effective date and most likely will be legally responsible for any resulting claims of failure to comply, bodily injury, or property damage? Would not this be the most responsible course of action to be taken?

Clearly all who specify visually-graded SP lumber (i.e., framing contractors, builders, engineers, architects and other building designers) and all who use visually-graded SP lumber (i.e., builders and framers) have to know when to implement new SP lumber designs and then be able to count on the following table (the complete table can be found at SPIB.org), to accurately provide lumber conventional framing resistance design.

<table>
<thead>
<tr>
<th>GRADE</th>
<th>Extreme Fiber in Bending “F_e”</th>
<th>Tension Parallel to Grain “F_t”</th>
<th>Horizontal Shear “F_s”</th>
<th>Compression Perpendicular to Grain “F_c”</th>
<th>Compression Parallel to Grain “F_p”</th>
<th>Modulus of Elasticity (million psi) “E”</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kiln Dried or 5-Dry, MC 15, MC 19</td>
<td>2700</td>
<td>1900</td>
<td>175</td>
<td>660</td>
<td>2050</td>
<td>1.6</td>
</tr>
<tr>
<td>Applies to 2” - 4” Thick – 2” - 4” Wide Only</td>
<td>2350</td>
<td>1650</td>
<td>175</td>
<td>565</td>
<td>1900</td>
<td>1.8</td>
</tr>
<tr>
<td>Dense Select Structural</td>
<td>2050</td>
<td>1450</td>
<td>175</td>
<td>480</td>
<td>1800</td>
<td>1.6</td>
</tr>
<tr>
<td>Select Structural</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non Dense Select Structural</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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To have any other engineering outcome means that the SPIB June 1, 2013 effective date means nothing, that it is only suggestive, which is not only implausible, but also a reckless interpretation.

SBCA has been consistently advocating—through its websites (understand the importance of design values, sortable span tables, SYP comparison tables, etc) and data obtained through recent full-scale testing conducted at the SBC Research Institute (SBCRI)—our engineering-based need for an industry policy articulating exactly why raw material design values are so important to the products this industry manufactures. This policy (sbcmag.info/dvp) follows fundamental and generally accepted engineering principles and embraces the June 1 effective date for implementation of the revised SP design values.

One Example of Marketing SP Design Value Changes

Given the importance of the June 1 date, the forest products industry is in, and will continue to be in, an active marketing mode. Here is one example of the information you may see (key concepts in this marketing release are highlighted):

May 14, 2013

CONTACT: John “Buddy” Showalter
202-463-2766, info@awc.org

New Southern Pine Design Values Implemented in AWC Standards and Design Tools

LEESBURG, Va. – The American Wood Council (AWC) has revised several of its standards and design tools in response to upcoming changes to Southern Pine design values. The American Lumber Standard Committee (ALS) Board of Review approved changes to design values for all grades and all sizes of visually graded Southern Pine and Mixed Southern Pine lumber, with a recommended effective date of June 1, 2013 to allow for their orderly implementation. The changes to AWC standards and design tools ensure they remain consistent with the new design values. Visit www.sbpib.org and www.southernpine.com for more details.

In advance of the implementation date, AWC has developed addenda and other updates to its standards and design tools as follows:

- Addendum to NDS® Supplement: Design Values for Wood Construction, to use with 2012 NDS, 2005 NDS, and 2001 NDS;
- Addendum to Design Values for Joists and Rafters, to use with Span Tables for Joists and Rafters;
- Addendum to 2012 Wood Frame Construction Manual (WFCM) for One- and Two-Family Dwellings, and
- Addendum to 2001 Wood Frame Construction Manual (WFCM) for One- and Two-Family Dwellings.

Visit www.awc.org for more information or follow us on Twitter: @woodcouncil.

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The Southern Pine revisions to design values has been one of the most challenging issues that those buying and using lumber have had to face in the last 30 years. As is commonly known, using the wrong Southern Pine design values after the June 1, 2013 date of effect may have downstream unintended consequences.


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  - 3:00 p.m. Eastern [More](#)

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MARKETPLACE

U.S. Steel Capacity Utilization Tops 79% for Highest Mark Since May 2012: AISI

U.S. steel mill capacity utilization reached 79.5% in the week that ended Saturday, its highest level in percentage terms since May 2012, according to a report released by the AISI on Monday.

In the week that ended May 18, U.S. steel mills produced an estimated 1.904 million st of steel, up 1.2% from the prior week's 1.881 million st. Capacity utilization climbed to 79.5% from 78.5% a week earlier.

Last week's output is 3.4% lower than in the comparable week of 2012, when steel mills produced 1.97 million st and operated at 79.2% of capacity.

But the last time the capacity utilization in percentage terms was any higher was in the week that ended May 19, 2012, when the steel industry produced 1.976 million st of steel and operated at 80% of capacity.

Year-to-date steel production totaled 36.71 million st, which is 7.1% lower than the 39.53 million st produced in the same period last year, the trade group said. Average capacity utilization so far in 2013 has been 76.6%, down from 79.5% in 2012, it added.

Southern steel production rose 7.3% week on week, reaching 689,000 st in the week that ended Saturday, compared with the prior week's 642,000 st. Northeast steel production edged up by 0.4% to 206,000 st in the most recent week from 205,000 st in the prior week.

Steel output in the Great Lakes region, however, dropped by 2.8% week on week to 667,000 st from 686,000 st. Midwestern steel production slid by 0.4% to 258,000 st from 259,000 st. Western steel production fell by 5.6% week on week to 84,000 st from 89,000 st.

AISI determines its weekly raw steel production data based on weekly data from 50% of the domestic industry and estimates the rest using monthly production data.

Source: American Iron and Steel Institute, May 20, 2013
MARKETPLACE

This Housing Upturn Looks Like the Real Thing

Ever since the recovery began in 2009, a weak housing market has held back the U.S. economy. The first rebound in home prices was lackluster and after only a year was followed by another dip. But the recent upturn in home prices looks like the real thing. One clear sign of a turning point: In March, homeownership hit a 17-year low, while the 12-month gain in home prices was the biggest in seven years. Those two extremes suggest that the market has hit bottom. The people who are least well financed have been squeezed out, while demand is growing among people who can afford to pay higher home prices. If that trend continues – and there are good reasons to believe it will – a substantial burden will be lifted from the U.S. economy.

The great surprise since the recession ended has been the weakness of the economic rebound, which has been particularly clear in the housing market. After falling 31% from 2006 to 2009, home prices rose almost 5% over the following year. But that recovery faltered, and during the next 20 months prices fell to a new low. Then the current recovery began, and barring another recession, all the evidence indicates that it will be sustainable:

In the first quarter, home prices were higher (compared with a year earlier) in 133 of 150 metropolitan areas, according to the National Association of Realtors. On a national basis, the median home price gained 11.3%, the biggest yearly gain since 2005.

The glut of homes for sale has diminished, down almost 17% compared with the previous year. In addition, the number of foreclosures in April (including bank repossessions and scheduled auctions) was 23% lower than a year earlier.

And a Fannie Mae survey of consumer expectations for housing found that a majority of those surveyed in April expect prices to rise, compared with only 32% a year earlier. That's the highest figure since the survey was begun three years ago. "Crossing the 50 percent threshold marks a significant milestone as most Americans believe a housing recovery is truly occurring throughout the country," the survey concludes.

The housing market has a unique relationship with the economy. Depressed prices hurt certain specific industries, of course, from homebuilders to companies that make building materials and home furnishings. But the huge price drop that occurred during the recession – by far the biggest in the past half century – had much broader effects.

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In general, falling house prices make homeowners feel poorer and more cautious about spending. By contrast, during the boom homeowners not only felt more affluent, but also were able to obtain additional spending money by refinancing. They could increase the size of their loans, and their monthly payments might even go down, since mortgage rates were relatively low. After home prices fell during the recession, however, refinancing became more difficult and this source of spending money largely disappeared.

The current rise in home prices and refinancings won’t necessarily lead to an immediate consumer spending boom. Home equity was massively eroded by the recession and has only started to recover. But at least the drag on consumer spending is no longer getting worse.

Further gains in home prices will depend to a great extent on easier lending conditions. “The housing market is improving, but mortgage credit conditions remain quite tight for borrowers with lower credit scores,” says Federal Reserve governor Elizabeth Duke. But she adds, “As the economic and housing market recovery continues, lenders should gain confidence that mortgage loans will perform well, and they should expand their lending accordingly.”

Moreover, the economics of housing will likely lead to a revival of demand. Buying is cheaper than renting in most U.S. cities. Including tax benefits, someone who buys a home today and lives in it for four to seven years will save from 20% to 40% over renting, based on national averages.

Equally important, home ownership offers a valuable inflation hedge. There’s no way of knowing when inflation will become a serious problem again. But considering the enormous amount of money created by the Federal Reserve since Quantitative Easing began in November 2008, it’s likely that consumer prices will start rising significantly faster at some point in the coming decade. In fact, inflation has totaled more than 8% in the five years since the recession, despite the sluggish economy.

At a certain point, these positive trends start to reinforce each other. As the economic recovery continues and unemployment comes down – even if that is happening disappointingly slowly – consumer incomes and average credit scores will rise. And as the number of troubled mortgages and foreclosures diminish, the quality of bank loan portfolios will improve and lenders should be willing to make more credit available.
That would help increase the demand for housing and enable potential buyers to pay higher prices. Moreover, a revived housing sector would add considerable momentum to the economic recovery – and gives this upturn in home prices a much better chance of continuing than the previous one.

Source: *Time*, May 15, 2013

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US Lumber Production Growth Outpacing Canada

A survey of Canadian and U.S. softwood lumber producers reveals while North American production was up in 2012, Canada's output was flat.

The latest WOOD MARKETS annual survey of the "top 20" Canadian and U.S. softwood lumber producers shows an uneven trend across North America for 2012: U.S. softwood lumber production increased 6.3% to 28.5 billion bf, whereas Canadian production increased only 0.4% to 22.6 billion bf. Rapidly increasing demand outpaced mill output in 2012, while blockbuster corporate acquisitions and catastrophic mill fires further altered the production landscape.

These and other industry highlights were released this week in the March issue of WOOD Markets Monthly International Report. The consultants at International WOOD MARKETS Group, Vancouver B.C. have conducted this survey annually since 1997.

The top 20 Canadian companies increased their market share of total Canadian lumber production, rising from 75% in 2011 to 80% in 2012. Canfor pulled ahead of West Fraser as the top Canadian lumber producer with 3.8 billion bf of production from its purchase of two sawmills from Tembec in the first half of 2012; Tolko, Resolute Forest Products and Western Forest Products took the next three spots. Together, these five firms produced a total of 11.6 billion bf (52% of Canadian lumber output, up from 48% in 2011). Despite surging prices in U.S. and China in the second half of 2012, it was not enough to change the production response at Canada's lumber mills from those levels achieved in 2011. A tightening of timber supplies in B.C., Ontario and Quebec were partly responsible.

Catastrophic fires and blockbuster corporate acquisitions played a role in shifting the top 20 landscape in 2012 and the early part of 2013. Fires and/or explosions at Hampton's sawmill in Burns Lake, B.C.; EACOM's sawmill in Timmins, Ontario; and Lakeland's sawmill in Prince George, B.C. together removed about 630 million bf of annual production capacity. Acquisition activity included Canfor's purchase of two B.C. sawmills from Tembec in 2012; Interfor's first quarter 2013 purchase of Rayonier's wood products business (including three sawmills); and Georgia-Pacific's first quarter 2013 purchase of Temple-Inland's building products business (including five sawmills). Following the acquisition, Georgia-Pacific will have a total of seventeen operating sawmills and should soar near the top of WOOD MARKETS' 2013 survey.

Source: SBC Magazine, March 22, 2013