

FRAMEWORK

YOUR GATEWAY TO THE STEEL FRAMING INDUSTRY

presented in metalHOME DIGEST



One of the things he likes best about building with steel is its design flexibility, and says it is easy to frame barrel ceilings, domes (pictured here) and other details with steel.

A FEW WORDS ABOUT STEEL

DON WHEELER: ONE BUILDER'S TRANSITION TO CUSTOM STEEL-FRAMED HOMES

WHEN DON WHEELER DECIDED TO MAKE THE SWITCH TO EXCLUSIVELY BUILD WITH STEEL BACK IN 1997, HIS REASONS WERE VERY SIMPLE. "I SWITCHED TO STEEL FRAMING TO AVOID CUTTING DOWN TREES TO FRAME HOMES," HE SAID. VISITS WITH HIS WIFE'S FAMILY IN WASHINGTON STATE, WHERE HE OBSERVED THE DAMAGE CLEAR CUTTING HAS ON LAKES, STREAMS AND THE TOTAL ENVIRONMENT, CONTRIBUTED TO HIS DECISION TO BE MORE ENVIRONMENTALLY CONSCIOUS. AND SINCE HE LIVES IN CALIFORNIA WHERE WILDFIRES ARE PREVALENT, HE ALSO LIKED THE IDEA OF BUILDING WITH STEEL SINCE IT IS NON-COMBUSTIBLE.

As a licensed general contractor and custom homebuilder since 1979, Mr. Wheeler now has extensive experience building with both wood and steel. Along the way, he has found many more benefits to building with steel, including its ease to work with, durability, sustainability, and design flexibility – something he

really came to appreciate during his first steel framing project. He was hired to build a 7,200 square foot custom home for a family in Pelican Hill, Calif. The home's plans called for numerous arches and serpentine walls, and he initially thought framing the arch soffits and walls would be a difficult task.

"Steel creates many advantages to framing barrel ceilings, domes and other details," Mr. Wheeler said. "Steel framing can actually be bent to an exact radius for any detail requiring a curve. It is also easy to make any radius in the field; steel cut correctly can bend to form any shape needed."

He has enjoyed a lot of success with the custom homes he has framed with steel over the past 10 years, and points out that steel framing's advantages are visible to anyone stopping by the Pelican Hill family's home. "Their home has no plaster cracks anywhere because steel does not expand and contract like wood. Steel also makes a stronger, straighter structure, which causes less movement in a building."

For now, he stick builds all of his custom

homes because of the control he feels it allows him to have over his projects. "Stick building works best for me right now," he says. "I find you don't have the same kind of control with panelizing that you do with stick building, where I have complete control. When I build a house, I'm there for every step. I'm there when the carpeting goes down."

Mr. Wheeler does admit that stick framing is much more labor intensive than panelizing, something he is looking to work toward for the future. On a 9,800 square foot home, for example, it took 82 days for a crew of eight to complete the framing. If he had arranged to instead have it panelized off site, he says it would have saved him and his crew a lot of time. "When I do decide to panelize, I will do it on-site because I like that control. If I need to change the size of something, I can easily do it because it will be on-site and I can control it."

For any builder who decides to stick-build, he encourages them to be innovative in finding the best ways to make it work for them. "There's more than one way to do things and you just need to be open to new approaches," he says. From careful planning to providing clear instructions on delivery of materials, here are a few tried and true tips that Mr. Wheeler has found make framing with steel most cost-effective and efficient for him:

PLANNING

Before he gets started with any construction project, Mr. Wheeler invests a lot of time in the planning stage. He carefully reviews his set of

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plans and looks for where he might save money. On an 11,000 square foot custom home in Santiago Canyon, Calif., the plans initially required seven moment frames. But once he switched the plans over to cold-formed steel, moment frames were no longer needed – and so no red iron. “This was a huge cost savings.”

ESTIMATING MATERIAL NEEDS

Practical field experience has helped him the most with estimating and ordering his materials. Once his plans are finalized, he very methodically begins to prepare for ordering



To save time on his job sites, Mr. Wheeler arranges for his supplier to place a label on the steel designating where it needs to be delivered in the structure.

through a series of spreadsheets. First, he develops his cut list which combines all the



Mr. Wheeler's first construction project with steel framing is this 7,200 square foot home in Pelican Hill, Calif.

steel lengths so that everything can be bundled the same. He then works on a material re-cap list, which makes it easier for the roll-former to roll everything out.

ORDERING THE MATERIALS

When ordering his materials, Mr. Wheeler arranges to have all of his materials cut to the exact size he needs. “By taking my time to pre-plan and lay everything out, I know exactly what I need and in what size. This eliminates scrap, although all steel scrap is recyclable so it wouldn't go to waste.” He also finds that it helps to be able to control how the materials are bundled and shipped. “By controlling how steel is bundled and shipped, you can have

everything together in a way that is easy to find and easier for your crew to identify. It makes the process a lot easier because it's a lot more organized.”

PREPARING FOR DELIVERY

Another technique that he finds makes his projects go smoother is to arrange for the supplier to place a label on the materials with instructions on where they will go once delivered, such as front entry stairs. “If you arrange to have your materials marked with this information, then you know everything is exactly where it needs to be. This saves time and money.”

Mr. Wheeler has found steel framing to be an economically viable way to build homes from the beginning. By following the simple steps he explains above, he believes any builder who decides to make the switch to steel can be as successful as he has been. “When someone tells you it costs more to build with steel, you just have to look at the whole picture. By investing the time up front in careful planning, it makes everything go much more smoothly and you save a lot of time on the job.”

Don Wheeler is president of Wheeler Construction Co. in Anaheim, Calif., and can be reached at donwheeler@sbcglobal.net or (714) 473-0229.

Editor's Note: Be sure to check out the November/December edition of Framework, when we talk to Danny Feazell, president of Premium Steel Building Systems in Roanoke, Va., about the success he has had building homes with panelization.



Steel Framing Alliance™

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COLD-FORMED STEEL FRAMING MEMBERS AND CODE COMPLIANCE REPORTS

BY NADER ELHAJ, P.E.
NAHB RESEARCH CENTER, INC.

COLD-FORMED STEEL (CFS) FRAMING IS CURRENTLY RECOGNIZED BY ALL MAJOR BUILDING CODES. THE INTERNATIONAL RESIDENTIAL CODE (IRC) ADOPTED A SET OF PRESCRIPTIVE PROVISIONS FOR RESIDENTIAL STEEL FRAMING, AND THE AMERICAN IRON AND STEEL INSTITUTE (AISI) HAS PUBLISHED SEVERAL AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI) APPROVED STANDARDS TO PROVIDE DESIGNERS, CODE OFFICIALS, AND USERS WITH MUCH NEEDED DESIGN INFORMATION AND GUIDELINES ON CFS MEMBERS. ADDITIONALLY, ASTM

INTERNATIONAL HAS PUBLISHED STANDARDS THAT SET THE REQUIREMENTS FOR THE GRADE, COMPOSITION, AND STRENGTH OF THE STEEL THAT IS USED TO MAKE COLD-FORMED STEEL MEMBERS.

So what do all of these specifications and standards have in common? **All CFS**



Standing second from the left, Mr. Elhaji confers with Danny Fezell, president of Premium Steel Building Systems in Roanoke, Va., during Steel University (see page 25) this summer. Both were instructors for the program.

COLD-FORMED STEEL FRAMING..
CONTINUED FROM PAGE 23

members must be properly labeled and they must conform to these standards.

While there are three methods available for ensuring conformance of CFS members to a specific standard or set of standards, obtaining a code report (such as an evaluation report) is the most widely used in the residential and light commercial markets.

A code report is a document that tells the user that the manufacturer's product(s) are:

- in compliance with the required standards and specifications;
- in compliance with the manufacturer's quality assurance (QA) program, and,
- the manufacturer's facilities have been inspected or audited to ensure compliance to the QA program.

WHAT DOES THIS MEAN TO A CFS MANUFACTURER, DESIGNER, CODE OFFICIAL, OR END USER?

The end user expects that all CFS products used on the project can be traced back to the manufacturer and that they comply with the building code. And the code official looks for a document stating compliance of the product to the applicable building code. The designer, on the other hand, expects that the supplier or manufacturer provides CFS members that conform to their design or specifications, while the roll former/manufacturer is responsible for ensuring all products delivered from their facility to a job site are quality products, conform to all applicable standards, and are traceable.

The International Code Council Evaluation Services, Inc. (ICC ES) publishes an Acceptance Criteria, AC 46, titled "Acceptance Criteria For Cold-Formed Steel Framing Members" that is widely used to ensure compliance to the specifications and standards. AC 46 requires a QA manual that addresses the minimum requirements of AC 10 "Acceptance Criteria For Quality Control Manuals" to be developed. Once that is done, the roll for-

mer may obtain a code report for the CFS product(s). The process for obtaining a code report varies among the different code report issuers. The two most common code report issuers are ICC ES (www.icc-es.org) and Architectural Testing, Inc. (ATI) (www.testati.com).

The development of a code evaluation report can be costly and the process is often lengthy; a roll former should be prepared that the time and expense required. Here are some tips that can help reduce the cost and expedite the process:

- Write an accurate and comprehensive QA manual that addresses the requirements of AC 10 and AC 46.
- Ensure the production of CFS members follows the processes outlined in the QA manual.
- Identify all products that you want included in the code report.
- Ensure all calculations, test reports, and other documentations are accurately done.
- Ensure all testing has been performed by an accredited testing facility.

Once these activities are done, a roll former can apply for a code report with any of the code report issuers, which will also require a third party inspection or audit of the roll former's facility. This requires a signed contract with an accredited third party auditing agency to perform the audit. Once the audit is complete and conformance is ensured, a code report can be issued by the issuing organization.

CFS manufacturers and roll formers do have another option. Add their facility to an existing holder of a code report or join

an association such as the Steel Stud Manufacturers Association (SSMA) which already has a code report. The new member would just need to have their production facility inspected by an accredited third party agency. Once all non-confor-

mances, if any, are resolved, the new member's facility can be added to the existing code report.

As inspectors and code officials continue to become more knowledgeable, they are rejecting jobs with CFS members that do not comply with the code-mandated standards. A simple omission of identification on the CFS framing members can result in major

delays, since product marking is a code requirement. Without product marking, tracing the finished studs back to the original source material to confirm coating, thickness, yield strength, and other required mechanical properties is much more difficult.



Photo provided by CEMCO Steel Framing and Metal Lath, a manufacturer of cold-formed steel framing and metal lath products serving the western states.

ABOUT THE AUTHOR

As senior structural engineer of the National Association of Home Builders Research Center, Nader Elhadj oversees the research and development of alternative building materials and emerging technologies focusing on residential steel framing. With more than 18 years experience in the design, analysis, and construction of building materials, he introduced steel framing to the U.S. building codes and co-authored the Prescriptive Method for Residential Cold-Formed Steel Framing in addition to other steel publications and technical notes. Mr. Elhadj is a seasoned presenter and instructor for seminars on cold-formed steel framing to various audiences. He is a member of the CFSEI, ASTM, and AISI Committee on Framing Standards, Mid-Atlantic Steel Framing Alliance, and ACI.

MHD

SFA'S STEEL UNIVERSITY OPPORTUNITY TO ADD STEEL FRAMING CURRICULUM TO MORE VOCATIONAL PROGRAMS IN LOUISIANA

NEARLY 20 INSTRUCTORS FROM 14 SECONDARY AND SIX POST-SECONDARY SCHOOLS IN THE LOUISIANA COMMUNITY AND TECHNICAL COLLEGE SYSTEM (LCTCS) WERE ON HAND THIS SUMMER FOR STEEL UNIVERSITY, THE STEEL FRAMING ALLIANCE'S (SFA) COMPREHENSIVE EDUCATION AND TRAINING PROGRAM DESIGNED FOR VOCATIONAL INSTRUCTORS.

CONDUCTED BY INSTRUCTORS DANNY FEAZELL (PRESIDENT, PREMIUM STEEL BUILDING SYSTEMS, ROANOKE, VA.), NADER ELHAJJ, P.E., (SENIOR STRUCTURAL ENGINEER, NATIONAL ASSOCIATION OF HOMEBUILDERS RESEARCH CENTER), AND MARIBETH RIZZUTO (SFA DIRECTOR OF TRAINING AND EDUCATION), THE PROGRAM WAS DESIGNED TO TRAIN BOTH HIGH SCHOOL AND POST-SECONDARY CARPENTRY INSTRUCTORS IN THE FUNDAMENTALS OF STEEL FRAMING. THE PROGRAM TOOK PLACE JULY 30 TO AUGUST 3, 2007 AT NUNEZ COMMUNITY COLLEGE, WHERE A STEEL FRAMING COURSE HAS BEEN OFFERED SINCE NOVEMBER 2006.



Ray Frobosilo Sr. (right), president of Super Stud Building Products in Astoria, N.Y., and principal in Safe Guard Building Systems of Hattiesburg, Miss., talks to the group about the steel framing industry and the benefits of building with steel in front of this steel-framed home in Slidell, La., built by Safe Guard. The group stopped there on their way for a field trip to the roll-forming plant, which was recently opened by Mr. Frobosilo and fellow principal, Andrew Marshall.



All of the "students" participating in Steel University reported getting a lot out of the week-long program, and many said they were interested in exploring the possibilities of adding steel framing to their curriculum. Pictured here, Danny (kneeling) goes over floor installation methods.



During the tour, the group had the chance to watch how a safe Guard Building Systems proprietary panel is constructed.



During training, students learned the proper techniques for using tools in cold-formed steel framing. The student in this photo is using a screw gun designed for steel-to-steel connections.

Circle #5

METALCON

INTERNATIONAL

METALCON INTERNATIONAL

OCTOBER 3-5, 2007
LAS VEGAS CONVENTION CENTER,
LAS VEGAS, NV

JOIN THE STEEL FRAMING ALLIANCE AT THE 17TH ANNUAL METALCON INTERNATIONAL CONFERENCE AND EXHIBITION, FEATURING 700 EXHIBITS OF ALL PRODUCTS NEEDED TO BUILD STRUCTURES WITH METAL, A COMPREHENSIVE EDUCATION PROGRAM (INCLUDING 10 SFA-SPONSORED SESSIONS ON COLD-FORMED STEEL LISTED BELOW), AND LIVE DEMONSTRATIONS. EACH YEAR, METALCON DRAWS AROUND 8,000 DESIGNERS, BUILDERS, DEVELOPERS, FABRICATORS AND SUPPLIERS FROM 42 COUNTRIES. VISIT WWW.METALCON.COM TO LEARN MORE – AND BE SURE TO STOP BY THE STEEL FRAMING ALLIANCE'S BOOTH – No. 1262!

Following is the schedule for Steel Framing Alliance-sponsored education sessions at METALCON this year. For a complete description of each session, visit www.steelframing.org.

TUESDAY, OCTOBER 2 **8 A.M. – 5 P.M.**

SP2 Design and Construction of Cold-Formed Steel Framed Mid-Rise Structures
 Presented by Don Allen, P.E., Director of Engineering, Steel Framing Alliance; and Mitch Hughes, CEO, Differential Solutions, Inc. (7.0 hours/LUs & PDH's – HSW)
 Fee: \$295 (Includes lunch, speakers' notes and more!)

WEDNESDAY, OCTOBER 3 **8:30 – 10 A.M.**

WE06 Connectors for Cold-Formed Steel
 Presented by Jim DesLaurier, director of Marketing, MARINO\WARE. (1.5 hours / LUs – HSW)

WE07 Cold-Formed Steel Composite Panel Foundation Walls

Presented by Thomas M. Shingler, P.E., president, Design Dynamics, Inc., and Daniel Farabaugh, P.E., president, Farabaugh Engineering and Testing, Inc. (1.5 hours / LUs – HSW)

10:15 - 11:45 A.M.

WE13 Are You Ready for Panelization?

Presented by Gregg Miller, president, T.E.A.M. Panels International. (1.5 hours / LUs – HSW)

WE14 New Flooring System for Cold-Formed Steel Construction

Presented by Kumar Natesaiyer, Ph.D., manager of Sales and Market Development, and Frank C. Pospisil, P.E., MBA, market development manager, both of Structural Technologies Group of USG. (1.5 hours / LUs – HSW)

THURSDAY, OCTOBER 4 **8:30 – 10 A.M.**

TH20 Pin Fastening: A Key to Success for Cold-Formed Steel

Presented by Lisa Beally, marketing and International Sales manager, Aerosmith Fastening Systems. (1.5 hours / LUs – HSW)

TH21 Don't be Rejected – Plan Review Perfection for Cold-Formed Steel

Presented by Lou Zylstra, P.E., Zylstra & Associates Engineering (also president of California Steel Framing Alliance and a CFSEI member). (1.5 hours / LUs – HSW)

10:15 - 11:45 A.M.

TH27 Use of Cold-Formed Steel in Residential and Commercial Projects

Presented by David Garza, P.E., S.E., president, Garza Structural Engineers, Inc. (1.5 hours / LUs – HSW)

TH28 Cold-Formed Steel Components: History, Evolution and Present Day

Presented by Allied Tube and Conduit – Mechanical Tube Division. (1.5 hours / LUs – HSW)

FRIDAY, OCTOBER 5 **8:30 - 10 A.M.**

FR35 Construction Solutions with Cold-Formed Steel

Presented by Don Allen, P.E., Director of Engineering, Steel Framing Alliance. (2.0 hours / LUs – HSW)

STEEL FRAMING ALLIANCE TRAINING AND EDUCATION CALENDAR

SEPTEMBER 28, 2007

Cold-Formed Steel Mid-Rise Construction, Structural Engineers Association of Ohio Conference, Columbus, OH. As part of a two-day series of structural design seminars, this 1.25 hour presentation will focus on a hotel structure in downtown Columbus with 9 stories of loadbearing cold-formed steel floors and walls, on a 12-story structure. To register, visit www.seaoo.org.

OCTOBER 4, 2007

Design and Inspection of Cold-Formed Steel Structures, McHenry County College, McHenry County, IL. To register, visit <https://ireg.mchenry.edu/mccpreg/>.

OCTOBER 24-26, 2007

STEELDoing It Right, San Jose, CA. - Developed jointly by the Steel Framing Alliance and the Association of Wall and Ceiling Industry (AWCI), the seminar covers the essential knowledge and techniques for the correct installation of cold-formed steel for most load-bearing and non-load bearing projects. It also covers the latest advancements to speed installation. Limited spaces are available and those interested in attending are strongly encouraged to register as soon as possible! Visit Upcoming Events at www.steelframing.org to register online today!

OCTOBER 31-NOVEMBER 2, 2007

2007 Design-Build Conference & Expo, Dallas, Texas – Sponsored by the Design Build Institute of America, it is the largest annual gathering of design-build owners and practitioners in one place. SFA will be exhibiting this year. www.designbuildexpo.com.

GREENBUILD 2007

NOVEMBER 7-9, 2007 • CHICAGO, IL

The Steel Framing Alliance will be exhibiting at this year's U.S. Green Building Council's Greenbuild International Conference and Expo. More than 18,000 building professionals from across the globe will come together for three days of outstanding educational sessions, renowned speakers, green building tours, over 850 exhibit booths, and more.

www.greenbuildexpo.com

COLD-FORMED STEEL'S RESISTANCE TO TERMITES RECOGNIZED IN RECENT ICC CODE CHANGE

A CODE CHANGE RECOGNIZING COLD-FORMED STEEL FRAMING AS A PRIMARY FORM OF TERMITE PROTECTION WITHIN THE INTERNATIONAL RESIDENTIAL CODE WAS RECENTLY PASSED BY AN OVERWHELMING MAJORITY OF THE INTERNATIONAL CODE COUNCIL'S VOTING MEMBERS. THE CODE CHANGE EFFORT RESULTED IN NEW LANGUAGE LISTING COLD-FORMED STEEL FRAMING ALONGSIDE OTHER APPROVED METHODS OF TERMITE PROTECTION. AS A RESULT, THE 2007 SUPPLEMENT OF THE IRC WILL READ AS FOLLOWS:

R320.1 Subterranean termite control methods. In areas subject to damage from termites as indicated by Table R301.2(1), methods of protection shall be one of the following methods or a combination of these methods:

- Chemical termiticide treatment, as provided in Section R320.2.
- Termite baiting system installed and maintained according to the label.
- Pressure-preservative-treated wood in accordance with the AWPA standards listed in Section R319.1.
- Naturally termite-resistant wood as provided in Section R320.3.
- Physical barriers as provided in Section R320.4.
- Cold-formed steel framing in accordance with Sections R505.2.1 and R603.2.1.

For more information, visit www.iccsafe.org.

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WHAT MAKES STEEL GREEN?

Steel is the most highly recycled material in the world – more than aluminum, paper, glass and plastic combined. Nearly 75.7 percent of all steel scrap in North America is recycled annually.

Steel is 100 percent recyclable and is the world's most versatile material to recycle – using old cars, buildings, bridges, steel cans, soup cans, etc.

All steel contains a minimum of 25 percent recycled content.

Steel is a recognized green building material (LEED and in the National Association of Homebuilders' (NAHB) Green Building Guidelines)

Steel is inorganic – it will not rot, warp, split, crack or support the growth of mold.

Steel is coated with zinc – a natural element. Steel's galvanized zinc coating prevents corrosion.

To learn more about why steel is a recognized green building material, visit www.steel framing.org.

MHD

Circle #x

SFA PARTICIPATES AGAIN IN ANNUAL SKILLSUSA COMPETITION

THE STEEL FRAMING ALLIANCE (SFA) RETURNED TO KANSAS CITY, MO., ONCE AGAIN FOR THE 43RD ANNUAL SKILLSUSA NATIONAL LEADERSHIP AND SKILLS CONFERENCE THAT TOOK PLACE IN JUNE. IN ADDITION TO BEING THE SOLE CORPORATE SPONSOR OF SKILLSUSA UNIVERSITY, WHICH ENCOMPASSES MORE THAN 40 EDUCATIONAL SESSIONS, THE ALLIANCE HAS BEEN AN ACTIVE PARTICIPANT ON THE SKILLSUSA TECHNICAL TEAM FOR THE SKILLSUSA CHAMPIONSHIPS CARPENTRY COMPETITION PROVIDING TECHNICAL SUPPORT IN THE DESIGN AND COORDINATION FOR EACH YEAR'S EVENT.

Of the 76 contestants who were on hand for this year's competition, many indicated they were already familiar with steel-framed construction. "When we first started participating in this competition, we would ask the group how many already knew about steel framing and we were lucky to see a few hands go up," said Maribeth Rizzuto, SFA Director of Training and Education. "This year, we were excited and encouraged to see almost every contestant raise their hand."

SFA's participation in this program has led to the inclusion of steel framing at a number of state and local programs nationwide as

The group of contestants participating this year listen in as instructors provide initial directions for the competition.



Contestants are judged on a number of criteria, including following instructions, the proper operation of tools, safety, and blue print reading.

sheathing and rigid foam board and one interior. The success of TeamWorks has grown to 38 teams from around the country.

Ms. Rizzuto adds that it is only through the generous continued support of several SFA members that makes this work possible. This year's support through product donations and technical assistance came from IRWIN Industrial Tools, Grabber Construction Products, Dietrich Industries, and DeWalt Industrial Tools.

Representing America's upcoming workers and leaders, SkillsUSA is a national organization serving more than 260,000 high school and college students and professional members who are enrolled in training programs for technical, skilled, and service occupations. Taking great pride in the dignity of work, SkillsUSA-VICA prepares America's high performance workers, providing quality education experiences for students in leadership, teamwork, citizenship and character development.

instructors and students alike recognize that steel framing is a technology that is becoming part of the mainstream in construction projects. And they are serious about knowing the latest skills for the workplace.

The Alliance's participation has also grown to include the TeamWorks Competition where teams of four build a joint project, demonstrating their preparation for employment in residential construction. They demonstrate their ability to work as a team performing skills in residential carpentry, plumbing, electricity and masonry. This year's contest included two steel-framed walls, one exterior with

While every year the Carpentry contestants have been challenged by a new application of cold-formed steel in their overall project, this year's event saw the addition of a structural steel wall including a box beam header. The contestant in this photo is finishing the installation of a box beam header.



Visit www.skillsusa.org to learn more about this annual competition. For more information about the Steel Framing Alliance's comprehensive training and education program, contact Maribeth Rizzuto, SFA Director of Training and Education, at (412) 521-5210 or msrizzuto@aol.com.

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FACED WITH THE THREAT OF A HURRICANE, HOMEOWNERS PREFER TO BUILD WITH STEEL

WHEN ASKED WHAT CONSTRUCTION MATERIAL THEY WOULD PREFER WHEN FRAMING THEIR HOUSE IF LIVING IN AN AREA PRONE TO HURRICANES, 69 PERCENT OF HOMEOWNERS PREFER STEEL AS THEIR MATERIAL OF CHOICE. THESE RESULTS FROM A RECENT SURVEY CONDUCTED BY GLOBAL RESEARCH FIRM HARRIS INTERACTIVE, INDICATE THAT CONSUMERS RECOGNIZE THE IMPORTANT ROLE THAT STEEL PLAYS IN PROTECTING THEIR HOMES AND FAMILIES.

Steel framing can be designed to resist damage by high winds associated with hurricanes, allowing the structure to stay intact. In addition, steel framing does not contribute to the growth of mold and mildew. In the aftermath of a hurricane, flooding usually occurs, leaving homes susceptible to mold and mildew, which are known to pose health risks, especially to those with asthma and other respiratory ailments. Building with steel also helps preserve natural resources and creates less waste, because 100 percent of steel is recyclable and can be salvaged from the clean up debris.

“Steel framing can be designed to withstand hurricane-force winds up to 150 mph and is protected from corrosion by a galvanized coating that can last hundreds of years,” said Larry Williams, president of the Steel Framing Alliance (SFA). “In addition, steel framing cannot be eaten by termites and does not burn. These benefits help to protect homeowners and their families in the event of a hurricane.”

The American Iron and Steel Institute (AISI) sponsored the hurricane-related questions as part of AISI's summer safety campaign, whose objectives are to educate consumers about the safety benefits of steel and to provide safety tips for consumers to help prepare them for natural disasters, such as hurricanes. These safety tips can be found on AISI's Web site at www.steel.org. One example of the types of tips provided on the Web site is that homeowners should develop a family plan that can be implemented in the event that a hurricane strikes.

“The results of this survey show that consumers continue to recognize an important connection between the strength of steel and the safety and security that steel can bring to their homes,” said David Jeanes, AISI senior vice president of market development. “Steel framing and roofing provide unparalleled solutions when it comes to protecting families from natural and man-made disasters. As an industry, we are continually working to bring these solutions to those areas most affected by disasters, such as the Gulf Coast region. By providing training programs to support building and roofing for contractors they are able to build the region back better with steel.”

The Atlantic Hurricane season began on June 1 and will run until November 30, during which time the U.S. National Oceanic and Atmospheric Administration (NOAA) Climate Prediction Center has predicted three to five major hurricanes.



After hurricanes Katrina and Rita destroyed more than 200,000 homes in the Gulf Coast, the steel-framed house in this photo was the only structure standing from its Biloxi, Miss., neighborhood.

CALIFORNIA FORUM

THE CALIFORNIA STEEL FRAMING ALLIANCE'S (CASFA) SECOND ANNUAL CALIFORNIA FORUM THAT TOOK PLACE AT THE DISNEYLAND RESORT® IN JULY, ATTRACTED A COUPLE HUNDRED ENGINEERS, BUILDING AND CODE OFFICIALS, CONTRACTORS AND ARCHITECTS.



Another highlight of the form was a special Tools and Technology Exposition with a 30x30-foot steel-framed centerpiece showcasing some of the latest steel framing tools and equipment from all the major steel product manufacturers.



The Forum's Exhibition in the Disney Resort Paradise Pier Hotel's Grand Ballroom showcased many cold-formed steel industry materials, products, and suppliers which was highlighted by a Steel-Framed Exhibitors Gazebo as the centerpiece. Pictured here are a few of the exhibitors (l-r): Frank C. Pospisil, P.E., MBA, market development manager, of Structural Technologies Group of USG; Don Allen, director of Engineering, Steel Framing Alliance, and Cold-Formed Steel Engineers Institute secretary; Bob Warner, western regional manager, TrusSteel of ITW Buildex Components Group, Inc.; and Darrell Meyer, Steelworks.



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FASTENING COLD-FORMED STEEL WITH HARDENED PIN TECHNOLOGY

LD HEADG



BY ROBERT J. SHLUZAS
PRESIDENT, AEROSMITH FASTENING
SYSTEMS, INC.

IF YOU'RE LIKE MOST PEOPLE WHEN TRYING OUT NEW TECHNOLOGY, BEFORE YOU REALLY LEARN 'HOW THINGS WORK' AND MORE IMPORTANTLY - HOW THEY MIGHT BENEFIT YOU - YOU'RE PROBABLY INCLINED TO BE A LITTLE HESITANT, ANXIOUS, AND NERVOUS. REMEMBER THAT FIRST TRY ON YOUR COMPUTER? WHAT ABOUT SETTING UP YOUR DVD PLAYER?

How about when we first started learning about cold-formed steel framing? Yes, advances in cold-formed steel framing and the ways we build with steel are no different. New ideas and new technologies are hitting our industry all the time....we need to see these new ideas, try them, test themthen embrace them. Just one example can be found in how we fasten cold-formed steel.

Today we see quite a bit of cold-formed steel framing fastened by hand with screws. A "traditional" approach, but by no means a standard. We can also see new technologies like crimps, clips, and even welds being developed in hopes of better productivity. One such technological advance that provides us immediate productivity comes from pneumatically driven, hardened steel pins. Tools and fasteners have each been developed, field-tested, and performance-proven over decades for not only cold-formed steel, but also structural steel and concrete fastening.

WHY CONSIDER TOOLS & FASTENERS 'TECHNOLOGY'?

Tools today are considered "delivery systems" for pins and have specific features that if present, enable greater performance when fastening in steel and/or concrete. They include several power sources like the prevalent pneumatic (air) driven tools, followed with gas, elec-

tric or powder actuated motors. Their conversion to a "steel driving" tool is dramatic and creates a tool significantly different from its wood fastening cousin.

Design features not found in 'wood' tools:

- Extra power from systems designed to use air pressures from 175-400 psi versus the conventional 80-120 psi.
- Driving mechanisms designed for higher impacts by changes in driver material and/or shape.
- Alignment mechanisms that help drive fasteners perpendicular to the surface.
- Depth of drive controls that help meet job quality and safety requirements.
- Speed that improves both fastening and overall job scheduling productivity.

Advances in fastener technology are taking place all the time. Consider how a ballistic pointed pin performs in cold-formed steel. What makes it hold?

Pins are not nails. Pins are not screws. They 'work' from very different dynamics that occur each time a pin is driven into steel. Pins are made from special grades of steel that are hardened through a unique 'heat treating' process that leaves them ductile yet extremely strong. This creates exceptional shear values for assemblies joined with pins.

Pins are also shaped in a variety of ways to achieve performance characteristics specific to joining to steel or concrete. Here are just a few of the pin features and their benefits in steel:

A pin has a ballistic point that causes a uniform displacement of steel when driven; unlike the tear out done with a screw or nail.

The dramatic force used to pierce the steel with a pin allows the steel to 'recoil' back

around the pin; creating a strong compressive force on the shank and exceptional withdrawal values.

Each variety of pin can have a different 'knurl' pattern on its shank; creating exceptional withdrawal values.

Head size (diameter) and shape can be varied to facilitate different materials that might be attached to steel or concrete. In some cases washers are added to the individual or collated pins for even more diversity of applications.

In other words, pins in many cases meet or exceed the withdrawal and shear values of screws. The major pin advantage becomes their speed of application and how they can make cold-formed steel framing easier and economically competitive.

In case you have not noticed cold-formed steel fastened with pins is being tried, tested, and certainly "embraced" when you realize the variety and number of residential and commercial projects done with pins.

For information about other pin and pneumatic pin technologies as well as other fastening methods, contact:

Aerosmith Fastening Systems
www.aerosmithfastening.com

ET&F Fastening Systems, Inc.
www.etf-fastening.com

Grabber Construction Products
www.grabberman.com

Henkel Loctite Corp.
www.loctite.com

Henrob Corporation
www.hebrob.com

ITW Buildex
www.itwbuildex.com

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COLD-FORMED STEEL ENGINEERS INSTITUTE NEWS



CFSEI PUBLISHES TECHNICAL NOTE ON ASTM STANDARDS FOR COLD-FORMED STEEL

The Cold-Formed Steel Engineers Institute (CFSEI) recently released a new Technical Note on ASTM Standards for Cold-Formed Steel. The Standards of ASTM International (formerly known as the American Society for Testing and Materials) are often referenced in local and state building codes and project specifications, and are therefore highly relevant to engineers working with cold-formed steel.

The Technical Note (No. G800-07a) provides a summary of the key ASTM Standards affecting cold-formed steel. CFSEI's Technical Note (available on the CFSEI Web site) focuses on the standards covering sheet steels that can be formed into framing members, framing members once they are converted to studs and tracks, installation of framing members, and screws and gypsum panel products.

TECHNICAL NOTE DEVELOPMENT ACCELERATES

Numerous Technical Notes are now in various stages of development as CFSEI implements an aggressive plan to increase the frequency and value of Technical Notes provided to members and the steel framing industry. The design guidance and technical information provided undergoes rigorous peer-review scrutiny to ensure that the most justifiable recommendations and accurate evidence are presented before any Technical Note is published.

CFSEI invites volunteers to author Technical Notes, join peer-to-peer review committees, and provide input on topics of interest for future Technical Notes. Please contact CFSEI Manager Brian Berger at (910) 431-3115 or bberger@steelframing.org to become involved.

CFSEI RE-FORMS FIRE AND ACOUSTIC TASK GROUP

Under direction of the CFSEI, the Steel

CFSEI COMMITTEE MEETINGS AT METALCON INTERNATIONAL

The following CFSEI meetings will take place during METALCON International at the Las Vegas Convention Center on Wednesday, October 3rd:

CFSEI Fire & Acoustic Task Group - 4 to 6 p.m.
CFSEI Board of Directors Meeting - Begins at 6 p.m.

Framing Alliance (SFA) is reactivating and reenergizing the Fire and Acoustic task group. Formerly the Fire Sound and Thermal Task Group, the Thermal Task Group has been spun

off as a separate entity to focus on the very specific issues dealing with steel framing and heat transfer. The remaining issues relating to fire resistance, steel-framed fire rated assemblies, sound transfer, and acoustic rating and testing will be under the purview of this new group.

Ray Frobosilo Sr., president of Super Stud Building Products in Astoria, NY, has volunteered to be chairman of the task group. With more than 35 years experience in the steel framing industry, Ray has a special interest in fire and acoustic issues as they relate to steel framing. Since starting Super Stud in 1973, he has been very active in working to grow the industry since that time. The American Iron and Steel Institute (AISI) has also hired Farid Alfawakhiri, P. E., formerly of the American Institute of Steel Construction, to be their code staff liaison for fire-related issues. Farid has extensive experience in fire engineering and fire related issues, and sits on ASTM Technical Committee E05 on Fire Standards.

If you are interested in participating in this task group, contact CFSEI Secretary Don Allen at (706) 597-8076 or dallen@cfsei.org.

ments in cold-formed steel lateral systems and changes that will affect design professionals. He will also present design examples from the CFSEI "Lateral Design Guide," set for release during the last quarter of 2007.

HAWAII CHAPTER

The Hawaii Chapter of CFSEI is busy implementing several programs and events for the fall and winter. Roger LaBoube will present a seminar November 19th in Honolulu, HI, on his stud-to-track gap research as well as the AISI's Framing Standards for Cold-Formed Steel Construction, which will be applicable for the upcoming adoption of the IBC. Numerical examples will be presented to demonstrate the economy that may be gained by using the Framing Standards.

Presentations on timely subjects and the results of pending research are planned for 2008 to keep Hawaii engineers informed and on the cutting edge. The chapter's Specifications Committee is in the process of preparing a Hawaii specification section for local engineers to use when referencing CFS on their projects.

For more information on Chapter activities, www.cfsei.org.

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CFSEI CHAPTER NEWS

ATLANTA/SOUTHEAST CHAPTER

The next meeting of the Atlanta/Southeast Chapter of CFSEI takes place September 21st. There will be a presentation on "Cold-Formed Steel Lateral Design: Resisting Wind and Earthquake Loads in Cold-Formed Steel Framed Structural Systems" featuring Jeff Ellis, Senior Engineering Project Manager for Simpson Strong-Tie Co., chairman of AISI's Lateral Design Task Group and president of CFSEI. Ellis will discuss the latest develop-

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