



UNIVERSITY OF MISSOURI-ROLLA

DIRECTOR: ROGER A. LABOUBE, PH.D., P.E.
FOUNDING DIRECTOR: WEI-WEN YU, PH.D., P.E.

VOLUME 14, NUMBER 2
SPRING 2004

18th Cold-Formed Steel Short Course Held in St. Louis

The Wei-Wen Yu Center for Cold-Formed Steel Structures held its 18th Short Course on Cold-Formed Steel Structures on October 14 - 16, 2003 in St. Louis, MO. Twenty-four engineers representing both consulting engineering firms and product manufacturers attended the course. Of the 24 attendees, one each was from Brazil and Columbia and three were from Korea.

The short course discussed the behavior of cold-formed steel members and connections. The course was structured to provide an introduction to behavior and design for the engineer unfamiliar with cold-formed steel. For engineers experienced with cold-formed steel design, the short course strengthened their understanding of the fundamental behavior of both members and connections, as well as provided a better understanding of the AISI design specification. A preview of future specification changes was also provided. Both commercial and residential applications of cold-formed steel were discussed.

Lectures were based on information contained in the AISI North American Specification for the Design of Cold-Formed Steel Structural Members, 2001 edition, and its Commentary. The text *Cold-Formed Steel Design*, by W. W. Yu, and the AISI Design Manual, 2002 edition, also served as course references.

The next short course will be offered in October of 2005. For more information please see the Center's website at www.umn.edu/~ccfss or email us at ccfss@umn.edu.

17th International Specialty Conference to be Held in Orlando

The Wei-Wen Yu Center for Cold-Formed Steel Structures will present the Seventeenth International Specialty Conference on Cold-Formed Steel Structures on November 4 & 5, 2004. The Conference is scheduled to be held in Orlando, Florida.

Recent research discoveries, as well as industry applications and developments, will be discussed. Approximately 50 technical papers will be presented during the two-day conference.

For more information regarding the conference and accommodations, visit the Center's website at www.umn.edu/~ccfss. To be added to the mailing list for conference brochures and other Center mailings, please email us at ccfss@umn.edu and provide your contact information.

Center Launches New Website

The Wei-Wen Yu Center for Cold-Formed Steel Structures is pleased to announce the launching of its new website. The site features an updated look and easier navigation options. New features, such as an FAQ section will be added in the near future. The site will also have a new address in the future. This address will appear in our Fall 2004 newsletter, but for now please use www.umn.edu/~ccfss to reach us. When the address change does occur, browsers typing in the old address will be redirected to the new one.

The site will still be somewhat "under construction" for a while but we hope to have any broken links repaired very soon. Please visit us soon and take a look around!

Don Allen Named SSMA Technical Director

The Steel Stud Manufacturers Association (SSMA), announced in December that Don Allen will be taking on the role of SSMA Technical Director. Allen currently serves as Executive Director for the Light Gauge Steel Engineers Association (LGSEA), as well as Director of Engineering Development for the Steel Framing Alliance (SFA). Through an agreement between the SFA and SSMA, Allen will staff a technical services office provided by the SFA in their headquarters in Washington, DC. This is also the location of the LGSEA's Headquarters office.

"I am excited about the opportunity for synergy between the organizations" said Allen, when asked about this shortly after the announcement. "The SSMA position will allow the LGSEA as well as the SFA to work more closely with manufacturers, and use some of our joint resources and synergies to better support our mission to help educate engineers and provide resources for design professionals."

The former Technical Director of the SSMA, Neal Peterson, retired in late 2003. Peterson's suggestion of Allen as a successor was voted on by the SSMA board in their annual meeting at METALCON in October of 2003. The transition became effective in December.

Allen may still be reached at the LGSEA headquarters office toll free at 866-GO LGSEA, or via email at steeldon@earthlink.net. For additional information on the SSMA or to download a copy of the SSMA's technical bulletin, go to www.SSMA.com or call their Headquarters office (Augie Sisco) at 312-456-5590.

New MCA Certification Program for Metal Roofing

The MCA Metal Roofing Certification Program is designed to promote widespread use of appropriate metal roofing products by certifying products that have met designated quality standards. The use of MCA Certified metal roof products will increase consumer confidence in selecting a metal roof.

Benefits of the Certification Program are assuring that correct base metals and exterior paint coatings are selected for the situation, differentiating levels of quality, creating a credible basis for product comparison, and providing a means of verifying metal roofing performance.

"I think this program is a win for everyone involved in the residential and steep slope metal roofing industry from steel companies through consumers," according to James Bush, Chair of the MCA Certification Program Committee. "There is now a way to clearly differentiate quality levels and show consumers how to apply industry standards to identify the most appropriate metal roofing products for their needs and budget." Metal producers, paint manufacturers, coil distribution centers, and roof product manufacturers will be involved in the Certification Program. Both product manufacturers and roofing contractors will be able to communicate the high standard of their products meeting the certification program requirements and set them apart from lesser-quality products in the marketplace.

Certified products will meet or exceed standards published in the Metal Construction Association's Guide Specification for Residential Metal Roofing. Products that meet specific requirements for base metal quality and have paint coatings that meet "real-time" weathering exposure requirements will be eligible for certification. They will be labeled as "MCA Certified Standard Painted," and "MCA Certified Natural." MCA anticipates adding aggregate (granular) coated roofing products in the future. The Metal Roofing Alliance will assist in promotion of the certification program through its targeted consumer awareness program.

For more information or to request an application packet visit the MCA website at www.metalconstruction.org.

MCA Announces 2004 Board of Directors

The Metal Construction Association (MCA) recently announced their Board of Directors for 2004. The appointments were announced at the MCA Annual Meeting in Marco Island January 24-27, 2004

There are two new members joining the MCA Board and five returning members. New to the Board is Norbert Schneider, President of Umicore Building Products USA Inc. in Raleigh, NC. Also new to the Board in 2004 is Renee Baker, Marketing Manager for Steelscape Inc. in Kalama, WA.

President Paul "Kit" Emert (Fabral - Lancaster, PA) is one of the five returning members. Emert agreed to stay on for an additional one-year term in order to properly implement critical steps to MCA's new strategic plan.

Other returning Board members include: First Vice President - T.A. "Dick" Bus (ATAS International, Inc. - Allentown, PA); Second Vice President, Treasurer/Secretary - Jeff H. Irwin (Benchmark Architectural Systems Inc. - Columbus, OH); Dave Fulton (NCI Building Systems Inc. - Houston, TX); Randy Ridenour (Atlas Bolt & Screw Co. - Ashland, OH).

AISI Publishes New Edition of Cold-Formed Steel Design Manual

- to Supplement North American Specification

The American Iron and Steel Institute (AISI) has just published the 2002 edition of the Cold-Formed Steel Design Manual, which includes updates for conformance with the 2001 edition of the North American Specification for the Design of Cold-Formed Steel Structural Members. The manual and the Specification were prepared to assist engineers in the design of cold-formed steel structures in both commercial and residential construction. Both are available for purchase on AISI's web site, www.steel.org.

The North American Specification was the first structural standard to be jointly developed for North American Free Trade Agreement (NAFTA) partners. Also known as the "harmonized standard", it is critical to growth in both the steel and construction industries because it raises cold-formed steel design technology to the same level in all NAFTA countries, allowing faster introduction of new technologies and opening up the marketplace for a wide variety of derivative products such as design aids and educational materials. The Specification is the result of a cooperative effort by the AISI Committee on Specifications for the Design of Cold-Formed Steel Structural Members, the Canadian Standards Association (CSA) Technical Committee on Cold Formed Steel Structural Members (S136), and the Camara Nacional de la Industria del Hierro y del Acero (CANACERO) in Mexico.

The just-published Cold-Formed Steel Design Manual consists of six sections:

- Part I, Dimensions and Properties: contains information on the availability and properties of steels referenced in the North American Specification, as well as tables of section properties and formulas for calculations of section properties;
- Part II, Beam Design: provides tables, charts and example problems to aid in beam design;
- Part III, Column Design: contains tables and example problems to aid in column design;
- Part IV, Connections: has tables and example problems to demonstrate connection design;
- Part V, Supplementary Information: contains design procedures that are not included in the North American Specification; and
- Part VI, Test Procedures: features test methods for cold-formed steel, a bibliography of additional pertinent test methods, and an example problem.

The Cold-Formed Steel Design Manual contains significant additions to assist designers, including:

- Standardized studs and tracks sections provided by members of the Steel Stud Manufacturers Association;
- New comprehensive design examples for:
 - C-section with openings - ASD and LRFD;
 - Unbraced equal leg angle with lips - compression;
 - I-section built up from channels; and
 - Bolted connection with consideration of shear lag;
- A table of cross references for North American Specification provisions and corresponding illustrative examples;
- New test procedures such as:
 - AISI TS-4-02, Standard Test Methods for Determining the Tensile and Shear Strength of Screws,
 - AISI TS-6-02, Standard Procedures for Panel and Anchor Structural Tests and Commentary on the Standard Procedures, and
 - AISI TS-8-02, Base Test Method for Purlins Supporting a Standing Seam Roof System.

Recognized by the steel and construction industries for its expertise in developing codes and standards, AISI's work in this area is conducted under the AISI Market Development Committee's Construction Market Program, which is supported through an investment by the following AISI member companies: Dofasco Inc.; Ipsco Enterprises Inc.; Ispat Inland Inc.; Nucor Corporation; Rouge Steel Company; Stelco Inc.; United States Steel Corporation; USS-POSCO Industries.

For more information about AISI's Construction Market program, visit www.steel.org.

AISI Committee on Framing Standards Update

By Jay Larson, American Iron and Steel Institute



The AISI Committee on Framing Standards (COFS) met in Tampa, FL at METALCON last fall and plans to meet in Las Vegas, NV at the AWCI Convention and Trade Show this spring. Operating under ANSI-accredited procedures and building on the accomplishments of the AISI Committee on Specifications, this active group continues in its efforts "to eliminate regulatory barriers and increase the reliability and cost competitiveness of cold-formed steel framing in residential and light commercial building construction through improved design and installation standards."

Four completed standards (shown above), which include the General Provisions, Header Design, Truss Design and Prescriptive Method for One and Two-Family Dwellings have gained building code approval and are popular among designers, builders, code officials, fabricators, manufacturers and suppliers. These documents can be purchased online at the Publications section of the AISI Bookstore at www.steel.org.

Committee efforts are currently focused on completing two new standards for Wall Stud Design and Lateral Design, as well as an industry Code of Standard Practice. For more information about the activities of the COFS, please check the AISI website at www.steel.org/construction/framing/ or contact Jay Larson at JLarson@steel.org.

AISI Committee on Specifications Meets

The Committee on Specifications for the North American Specification for the Design of Cold-Formed Steel Structural Members and its subcommittees met for their semi-annual meeting on February 18th, 19th, and 20th in Albuquerque, NM. The meeting consisted of updates on ongoing research as well as discussion on proposed changes to the Specification.

Research reports were presented on several AISI sponsored research projects. Dr. T.B. Pekoz updated the Committee on the progress of a study of cold-formed steel beam-columns. Distortional buckling experiments were the focus of a study reported on by Dr. Ben Schafer. Dr. T.M. Murray briefed the Committee on the progress of a study to better define the anchorage forces for a Z-purlin roof system. Dr. Steve Fox summarized a study of the strength of transversely loaded stud-to-track connections. A study to re-evaluate the tilting and bearing strength of screw connections was reported by Dr. Roger LaBoube. The second edition of the AISI Guide for Designing with Standing Seam Roof Panels is a project under the direction of Dr. Jim Fisher.

A major focus of the meetings was the development of the 2004 addendum to the specification. Several enhancements to and/or additions to the Specification were adopted at the meetings. These enhancements or additions pertained to the following:

1. AISI test procedures will be submitted to ANSI for approval as national test standards.
2. New block shear equations were adopted.
3. New design provisions for unstiffened lips under stress gradient.
4. Revision to the design provisions for built-up columns.
5. Changes to the design provisions for brace design when neither flange is connected to sheathing.
6. Revision of the combined bending and web crippling design provisions.
7. Changes to diaphragm design for screw connections.
8. Revision to the definition of one-flange and two-flange loading for web crippling design.
9. Changes to the design coefficients for end-one-flange web crippling for deck sections.

Cool Metal Roofing Now on Whole Building Design Guide Website

The Cool Metal Roofing Coalition announces the recent posting of the Cool Metal Roofing Resource Page to the Whole Building Design Guide (WBDG) website. The WBDG, a project of the national Institute of Building Sciences, provides single-point uniform access and use of facility information in a knowledge-based management environment. It gives an overview of topics, concepts, and "best practices" associated with good "whole building" design, and then offers a ready means of accessing commercial and government guides, standards and criteria for creating quality, high-performance building projects.

Resource Pages are at the heart of the WBDG, providing reductive summaries on topics written by industry experts. The Cool Metal Roofing Resource Page - actually eight pages - discusses

metal roofing and, in particular, cool metal roofing. The types and characteristics of metal roofing are reviewed, as well as its useful life and life cycle economics. Low slope and retrofit applications, relevant codes, energy standards, and rating programs are comprehensively covered. Many additional resources are identified for the reader, with ready links to most.

WBDG is also a powerful, intelligent interface for the NIBS Construction Criteria Base (CCB), the single integrated source of all federal facility criteria. U.S. DOD personnel can access private sector standards via the WBDG. Other features include:

news, events, and training; links to relevant Federal Mandates; and contact information. Current and new users alike can see the latest on the WBDG at www.wbdg.org, including the Cool Metal Roofing Resource Page. Using the search function on the site, simply enter "Cool Metal Roofing" to link to the resource page.

"We are delighted to see our new Cool Metal Roofing Resource Page up and running on this well respected, state-of-the-art information source," explains Scott Kriner, Coalition Chairman. "With the draw of WBDG's high quality content and the power of the Internet, people will

learn more quickly about the superb environmental benefits of cool metal roofing." Coalition Vice-Chairman Jim Robinson adds, "Roofing performance is a

key part of whole building design, so it's very fitting that the Cool Metal Roofing Resource Page is now available in the WBDG."

The Coalition educates architects, owners, specifiers, and standards officials about sustainable energy-related benefits of metal roofing. Sustaining Member are the American Iron and Steel Institute, Galvalume Sheet Producers of North America, Metal Building Manufacturers Association, Metal Construction Association, and National Coil Coating Association. Affiliate Members include Oak Ridge National Laboratories and the American Zinc Association.

MCA Announces 2003 Presidents Award Winners

The Metal Construction Association (MCA) recently announced the recipients of the 2003 Presidents Awards. The ceremony was held at the MCA Annual Meeting in Marco Island, January 24-27, 2004.

The Awards process began when *Metal Architecture* magazine held their Annual Design Awards contest, in which all architects and manufacturers are invited to submit their best construction projects using metal. MCA uses those submissions that utilize member company products to select the winning entries for the Presidents Awards. There are seven categories for the MCA Presidents Awards, each recognizing the outstanding design of metal buildings and roofs. The purpose of the Presidents Award is to demonstrate the exciting design possibilities of using metal in construction.

The 2003 MCA Presidents Award winners are as follows: In the Historical Restoration category, Umicore Building Products USA, Inc. for their work on the Asian Art Museum in San Francisco, CA; in the Commercial category, CENTRIA, for their work on Reliant Stadium in Houston, TX; in the Institutional category, Morin Corporation, for their work on Prospect Place Modular Buildings in New Haven, CT; in the Residential category, Metal Sales Manufacturing Corporation, for their work on 5A Farms in Belleville, TX; in the Metal Roofing Category, MBCI, for their work on the Lester E. Palmer Events Center in Austin, TX; in the Industrial category, CENTRIA, for their work on Sara Lee Coffee & Tea in Suffolk, VA; in the Overall Excellence category, ATAS International and CENTRIA, for their work on the Clover Park Technical College of Automotive Education and Training Facility in Lakewood, WZ.

AISI Publishes Steel Stud Brick Veneer Design Guide

The American Iron and Steel Institute (AISI) has just published the Steel Stud Brick Veneer Design Guide to assist structural engineers and architects in their design of these systems for commercial and high-rise residential buildings. It is available for purchase on AISI's web site, www.steel.org.

Steel stud brick veneer walls are designed to resist out-of-plane wind and earthquake loads and to provide an environmental separation between internal and external conditions. The new AISI design guide reviews relevant structural and building science principles. It also provides general guidelines for the detailing of steel stud brick veneer walls and specific structural design recommendations. The guide serves as a companion document to the Cold-Formed Steel Framing Design Guide, which is also for sale at www.steel.org.

"AISI is providing this new publication in response to requests from structural engineers and architects for guidance on the proper design of steel stud brick veneer systems," said Delbert F. Boring, P.E., vice president of construction for AISI. "The guide also provides instruction for properly installing the wall insulation, air barrier, and vapor retarder to meet requirements for both warm and cold climates. The manual brings this information into one doc-

ument, allowing engineers and architects to work together more efficiently."

Mr. Boring said that the Steel Stud Brick Veneer Design Guide was developed by Thomas Trestain of T.W.J. Trestain Structural Engineering in Toronto, Canada. Mr. Trestain is a professional engineer with expertise in the design and erection of cold-formed steel framing products. He is an active member of AISI's Committee on Specifications for the Design of Cold-Formed Steel Structural Members and other voluntary industry committees, and is author of the Cold-Formed Steel Framing Design Guide. The author's approach to the design guide is founded on one underlying principle—that the structural reliability of cold-formed steel framing makes it a logical backup for brick veneer.

Recognized by the steel and construction industries for its expertise in developing codes and standards, AISI's work in this area is conducted under the AISI Market Development Committee's Construction Market Program, which is supported through an investment by the following AISI member companies: Dofasco Inc.; Ipsco Enterprises Inc.; Ispat Inland Inc.; Nucor Corporation; Rouge Steel Company; Stelco Inc.; United States Steel Corporation; and USS-POSCO Industries

For more information about AISI's Construction Market program, visit www.steel.org.

ASCE-SEI Committee Meets

A special report on bracing, upcoming sessions at the Structures Congress, and discussions on how to better coordinate the ASCE committees efforts with other cold-formed steel groups were the main topics of discussion at the ASCE-SEI committee on cold-formed steel meeting in Albuquerque on 20 February 2004.

Dr. Tom Sputo, a member of the committee, was awarded a special project from ASCE to develop a state of the art summary of bracing systems for use in cold-formed steel design. The committee reviewed Dr. Sputo's draft of the introductory materials and is working with him to develop a complete draft of the report by August 2004.

The committee is sponsoring a session on metal building design, including seismic, at the May 2004 Structures Congress in Nashville (www.asce.org/conferences/structures2004) and has proposed a session on load-bearing cold-formed steel behavior and design for the April 2005 Structures Congress in New York City (www.asce.org/conferences/structures2005). The committee is looking into ways to better coordinate with LGSEA, CCFSS and all the other fine organizations interested in encouraging research and design in cold-formed steel systems.

For more information on the committees efforts please visit their web site (www.ce.jhu.edu/bschafer/asce-sei-cfs/asce-sei-cfs.htm), ASCE-SEI members interested in joining the the committee are encouraged to do so, please contact the chair, Ben Schafer at schafer@jhu.edu.

The CCFSS News and CCFSS Technical Bulletin are published bi-annually to the Center's website. Current and past volumes of each publication may be viewed in .pdf format on the Center's website www.umn.edu/~ccfss.

To receive the CCFSS News and CCFSS Technical Bulletin by email, as well as brochures and other announcements by regular mail, please contact the Center at ccfss@umn.edu and provide us with both your email and physical mailing addresses.

2004 SSRC Annual Stability Conference Held in Long Beach

By Nestor Iwankiw, SSRC Chairman

As in the last few years, the Structural Stability Research Council (SSRC) has continued the successful practice of scheduling its Annual Stability Conference within the framework, and in conjunction with, the American Institute of Steel Construction (AISC) North American Steel Construction Conference (NASCC). This year's big event was held in Long Beach, CA from March 24-27, 2004, and it also included the 2004 Pacific Structural Steel Conference. Special recognition was made of SSRC's 60th Anniversary year through distribution of commemorative pins to its membership.

The SSRC track in the main conference program numbered 7 sessions, with a total of 20 presentations that covered such diverse topics as seismic stability, frame stability, element stability, and lateral-torsional buckling. An accompanying SSRC Proceedings documented all these technical papers and the talks given during the additional SSRC Saturday morning session. Interesting follow-up questions and discussion occurred during all these sessions.



From left: Dinar Camotim, Ramulu Vinnakota, Nestor Iwankiw, Nuno Silvestre

Particularly noteworthy was the presentation of the 2004 SSRC Lynn S. Beedle Award by SSRC Chairman, Nestor Iwankiw, to Yuhshi Fukumoto, Professor, Fukuyama University (see related article, pg. 8). This Award, given in acknowledgment of Dr. Fukumoto's SSRC membership, outstanding career-long contributions to stability research, leadership in fostering international engineering cooperation and the development of design codes and standards, was given out during the Friday morning General Session, after which the 2004 AISC T.R. Higgins Award and talk followed. Dr. Fukumoto gave his technical presentation on "Cyclic Performance Assessment of Stiffened Box Columns with Thickness Tapered Plates" during the opening SSRC session on the afternoon of March 24th. The first recipient of the SSRC Beedle Award was Dr. T. V. Galambos in 2002.

A full slate of Saturday sessions and Task Group (TG) meetings were dedicated to the usual continuing SSRC work and new stability research needs and developments. A short Annual Business Meeting was also held, during which

Chairman Iwankiw summarized the major progress, current work, and future objectives of the Council. Dr. Don Sherman, SSRC Treasurer, former Chairman, and long-time member of the Executive Committee, was honored with a special SSRC Lifetime Achievement Award for his diligent efforts on SSRC budgets and finances, and for his career research achievements on the stability of steel tubular members and connections. Also honored was this year's winner of the Sarada M. and Raju A. Vinnakota Award, Nuno Silvestre and his faculty advisor and co-author, Prof. Dinar Camotim, from the University of Lisbon, for the Conference paper "Towards an Efficient Design Against Distortional Buckling: Formulae for C and Z-Section Cold-Formed Steel Members". Nuno Silvestre received the Vinnakota Award plaque and a \$500 check.



Don Sherman receives the SSRC Lifetime Achievement Award from Chairman Nestor Iwankiw

Among the other recent Council activities highlighted by Chairman Iwankiw during the Annual Business Meeting were:

- the smooth relocation of its Headquarters office to the University of Missouri-Rolla,
- its vastly improved financial condition,
- preparations for the next edition of the Stability Guide text,
- new initiatives to stimulate worthy research ideas and
- to reorganize the SSRC website for easier and better utilization by its Membership, and by others.
- Several changes in TG Chair and Executive Committee leadership were noted, with great appreciation to those who had completed their service.

Of great interest and value to both the SSRC and the profession are the ongoing second series of joint SSRC-AISC short courses for continuing education. This excellent six-hour program on "Basic Design for Stability-Columns and Frames" was presented in Long Beach on March 27th to approximately 100 engineers. Many more such courses have been scheduled around the major US cities for later this year, and into 2005. More information on these can be found through the AISC website www.aisc.org.

For more information about SSRC, ordering publications, or about becoming a member, please check the SSRC website at <http://www.stabilitycouncil.org/>, or phone 573-341-6610.

Yuhshi Fukumoto Receives 2004 SSRC Beedle Award

The Structural Stability Research Council recently named Professor Yuhshi Fukumoto as the recipient of the 2004 Lynn S. Beedle Award. The award was presented to Prof. Fukumoto by SSRC Chairman, Nestor Iwankiw, at the 2004 SSRC Annual Stability Conference in Long Beach, CA.

The Beedle award was established in honor of Prof. Lynn S. Beedle, an international authority on stability and the development of code criteria for steel and composite structures. Prof. Beedle was a leader and outstanding contributor to the work of the Structural Stability Research Council for a period of more than 50 years, establishing the council as the pre-eminent organization worldwide in the area of structural stability. Prof. Beedle passed away in 2003.

Yuhshi Fukumoto is a long time member of SSRC and topical editor of *Stability of Metal Structures - A World View*, 2nd Edition, and has been a worldwide leader in structural stability research and education for more than 40 years. His key contribution was to establish the experimental database in the validation of limit state design procedures for steel structures. Prof. Fukumoto received a doctorate in civil engineering from Lehigh University and his academic career includes professorships at Nagoya University, Osaka University and Fukuyama University. He has also made significant contributions to the organization of the Pacific Council of Structural Steel Associations (PCSSA) and has chaired the IABSE WC 2 Steel, Timber and Composite Structures. He currently serves as Vice-President of Japanese Society of Steel Construction (JSSC).



Prof. Yuhshi Fukumoto accepts the 2004 Beedle Award

MCA Annual Meeting Update

The Annual Meeting of the Metal Construction Association was held January 24-27, 2004 in Marco Island, FL. During the meeting, updates were given on the Cool Metal Roofing Coalition's activities, which include research programs, a harm assessment to metal roofing California Title 24, and a training workshop planned for later in 2004. MCA's research programs on electromagnetic uplift testing, composite roofing uplift, air permeability of metal shingles, and finite element analysis of metal roofing systems were also summarized. A new research program studying energy efficiency of granular-coated metal roofing was described. An update was given on the status of the OSHA/Steel Coalition's activities regarding the elimination or minimization of liquid lubricants on metal roofing products. The Diaphragm Design Manual research has been completed and the manual is being re-written. Plans call for ICC-ES approval of the manual and availability before end of 2004. A manual on Cold-Climate Design for Metal Roofing is in the final stages of development, as is a technical bulletin on recycled content of metal roofing.

A meeting of the Codes and Standards Committee also took place at the annual meeting. Code language on moisture control and ventilation was reviewed and modifications were suggested. In addition, a technical paper on moisture control and ventilation will be prepared by MCA. The roofing section of the NFPPA code was discussed at length, with interest on corrosion, materials, flashing requirements and underlayments. The NFPA roofing section is being prepared for review later this year. Updates on the changes to the Florida Building Code and the California Building Code, in the wake of the wildfires, were discussed.

The semi-annual meeting of MCA is scheduled for August 3-5, 2004 in Cincinnati. For more information see www.metalconstruction.org.

MBMA Updates 2002 Metal Building Systems Manual

The first update to the 2002 Metal Building Systems manual will soon be available on the Metal Building Manufacturer's Associations's website www.mbma.com. The document will include updates to the seismic design example, authored by Robert Bachman, Rick Drake, Martin Johnson, and Thomas Murray, and the AISC-MB Certification chapter. Postcards will be sent to everyone who purchased the manual informing them about the update shortly. If there are any questions, please contact the MBMA office at 216-241-7333.

