THE STEEL CONFERENCE

There's More for Everyone at the 2006 Steel Conference

THIS YEAR'S NASCC: THE STEEL CONFERENCE IN SAN ANTONIO, TX WILL FEATURE COUNTLESS OPPORTUNITIES TO NETWORK WITH INDUSTRY LEADERS AND TO CONTINUE YOUR EDUCATION IN THE LATEST DEVELOPMENTS IN STRUCTURAL STEEL DESIGN AND CONSTRUCTION. FROM FEBRUARY 8–11, MORE THAN 60 TECHNICAL SESSIONS

will be offered in five separate tracks: engineering, fabrication, erection, detailing, and, new to this year's conference, seismic. The schedule for each of these sessions—and for the conference's short courses, exhibit hall, and social program—can be viewed at www.aisc.org/nascc.

TECHNICAL TRACKS

The new seismic track is a prime example of how this year's Steel Conference—more than ever before—will offer more for everyone. This track will provide technical sessions for all members of the steel construction team—from engineers to detailers, fabricators, and erectors. Sessions include a briefing on the forthcoming 2006 AISC *Seismic Design Manual*, which is based on AISC's 2005 *Seismic Provisions*—the recognized standard for steel design, fabrication, and erection of structural steel members and connections for buildings and building-like structures in zones prone to seismic activity. Other sessions focus on topics like detailing for seismic connections, earthquake engineering and seismic codes, and seismic issues in industrial building design and construction.

Within each of the other specialized tracks, the Steel Conference will offer a variety of workshops designed to bring together more than one sector of the steel design and construction community. A certification workshop for fabricators, presented by Quality Management Company, is also directed toward erectors. The "ABC's of Getting Paid" will be valuable for fabricators, erectors, and detailers alike. And "HSS Connection Design," presented by Jeffrey Packer, an international leader in that field, will offer information of interest to engineers and detailers, erectors, and fabricators.

SHORT COURSES

The 2006 short courses will give attendees the opportunity to earn CEUs or PDHs while updating their knowledge of interoperability, beam buckling and bracing, termination, and the new AISC specification and manual. A pre-conference symposium on "Purging Extras" will provide a discussion among architects, owners and developers, engineers, and fabricators about how to minimize extras—and complaints—on construction projects. The results of this discussion will be delivered to the AISC Committee on the *Code of Standard Practice*.

EXHIBIT HALL

The Steel Conference has already drawn more than 130 product manufacturers to showcase the latest in engineering and detailing software, fabrication equipment, and structural steel construction materials. This year's 65,000+ sq. ft exhibit hall will feature more than 400 booths, as well as a detailing pavilion and heavy machinery area. The exhibit hall will also feature again the popular heavy machinery classroom, where heavy machinery exhibitors will give presentations on product developments.

KEYNOTE SPEAKERS

Among the conference's plenary sessions will be a keynote speech by Gene Kranz, leader of the "Tiger Team" of NASA flight directors who brought the Apollo 13 spaceship safely back to Earth on April 17, 1970. Kranz's lecture, "Failure is Not an Option" reflects on his years of experience in the space program. Other keynote speakers include James M. Fisher, S.E., who will impart some of the valuable lessons he has learned in 40 years of practice as a structural engineer in his lecture, "Design!" This year's T.R. Higgins Award Lecture will be delivered by 2006 award recipient Ronald Hamburger, P.E., S.E. Hamburger will present his paper, "Alternative Methods of Evaluating and Resisting Progressive Collapse in Buildings."

STABILITY CONFERENCE

And, as in years past, the Structural Stability Research Council's (SSRC) Annual Stability Conference will be held in conjunction with the Steel Conference. This "conference within a conference" will include technical sessions on the stability issues such as bridge stability, stability of plate structures, stability of unique structures, and column and frame stability, to name a few.

This year's conference dinner will be held at Knibbe Ranch, a working ranch in Texas Hill Country. And the 2006 Steel Conference will also give attendees an opportunity to tour the brand new facility of an AISC member steel service center, Triple-S Steel/Intsel in San Antonio.

Mailed registration forms for the 2006 Steel Conference will be accepted until January 23, while online registration will be open until February 3 at **www.aisc.org/nascc**. After these dates, registration must be completed on-site at an increased rate. Do not miss your opportunity for a great value for this incredible event!

SSRC Beedle Award Presented at 2006 Stability Conference

Joseph A. Yura will be presented with the Lynn S. Beedle Award at the 2006 Annual Stability Conference, February 8-11 in San Antonio, TX. The conference is organized by the Structural Stability Research Council (SSRC) and will be held in conjunction with NASCC: The Steel Conference. Registration for both conferences is available at **www.aisc.org/nascc**.

The award is presented by SSRC and was established in honor of Lynn S. Beedle, an international authority on stability and the development of code criteria for steel and composite structures.

The recipient of the Beedle Award must be a long-time member of SSRC and a globally recognized leading stability researcher or designer of structures with significant stability issues. The recipient must be a leader in fostering cooperation between professionals worldwide, and must have made significant contributions to national and international design code development.

Yura was awarded lifetime membership to SSRC in 1995. He has served on numerous committees of SSRC, the American Society of Civil Engineers (ASCE), and the Research Council on Structural Connections (RCSC). He was a member of the AISC Specification Committee for more than 20 years and has served as chairman of the stability subcommittee and the bending and shear subcommittee. He is widely published in technical engineering journals including AISC's *Engineering Journal* and ASCE's *Journal of the Structural Division* and *Journal of Structural Engineering*.

Yura holds a master's degree in civil engineering from Cornell University and a Ph.D. in civil engineering from Lehigh University. He began working for the Department of Civil Engineering at the University of Texas, Austin in 1966 and in 1975 was named professor. In 1982 he became a Warren S. Bellows Centennial Professor in Civil Engineering, and in 2000 he was appointed as a Cockrell Family Regents Chair in Engineering.

For more information about the Lynn S. Beedle award or SSRC, please visit **http://campus.umr.edu/ssrc/**. For more information about the 2006 Annual Stability Conference or the 2006 Steel Conference, please visit **www.aisc.org/nascc**.

2006 Higgins Award Winner to Speak

2006 T.R. Higgins Award recipient and seismic design authority Ronald Hamburger, P.E., S.E will present his award-winning paper, "Alternative Methods of Evaluating and Resisting Progressive Collapse in Buildings," for the first time at the 2006 NASCC: The Steel Conference.

Higgins's speech will take place Friday, February 10 during the Steel Conference's third plenary session. Registration for the conference, which will be held February 8-11 in San Antonio, TX, is available at **www.aisc.org/nascc**.

Each year, the T.R. Higgins Lectureship Award recognizes an outstanding lecturer and author whose technical paper, published during the eligibility period, is considered an outstanding contribution to engineering literature on fabricated structural steel.

As the Higgins Award winner, Hamburger will present his paper a minimum of six times throughout 2006 following the conference. He is a principal and regional head of structural engineering for Simpson Gumpertz & Heger, Inc. consulting engineers in San Francisco and has published more than 90 professional papers, journal articles, and handbook articles. His award-winning paper originally appeared in the *Steel Building Symposium: Blast and Progressive Collapse Resistance* proceedings as "Design of Steel Structures for Blast-Related Progressive Collapse Resistance."

Hamburger has investigated earthquake damage to buildings around the world, and has served as a visiting professor of earthquake engineering at the University of California, Berkeley.

He is chairman of the scientific advisory committee for the Pacific Earthquake Engineering Research Center, the Building Seismic Safety Council's Provisions Update Committee, and of the AISC Connection Prequalification Review Panel. He is vice chairman of the AWS Seismic Task Group of the D1.1 Structural Welding Committee. Hamburger also serves as Project Technical Director for the Applied Technology Council's ATC-58 program to develop next-generation performance-based seismic design criteria.

He is a past president of the National Council of Structural Engineers Associations (NCSEA), the Structural Engineers Association of California (SEAOC), and the Structural Engineers Association of Northern California (SEAONC). He has served on several American Society of Civil Engineers (ASCE) task committees, including the ASCE 7 Standards Committee.

Hamburger was a member of the Federal Emergency Management Agency (FEMA)/ASCE Building Performance Assessment Team that performed preliminary investigations of the collapse of the World Trade Center. He also played a key role in the detailed investigation that was later performed by the National Institute of Standards and Technology (NIST).

For more information about the T.R. Higgins Award, please visit **www.aisc.org/higgins**. For more information about the 2006 Steel Conference, visit **www.aisc.org/nascc**.

Correction

The November 2005 issue of *MSC* incorrectly identified the chairman of AISC's NASCC Committee. Terry Zwick, of Atlas Iron Works, is the current NASCC Committee Chairman, while John Yohe, of Megquier and Jones, Inc., served as chairman prior to Zwick. We regret this error.

TECHNICAL DOCUMENTS

2005 Seismic Provisions Available for Download

The new AISC seismic standard, *Seismic Provisions for Structural Steel Buildings* (ANSI/AISC 341-05), is now available to download free from www.aisc.org/2005seismic. This new standard, which includes Supplement No. 1 (ANSI/AISC 341s1-05) and commentary, supersedes the 2002 *Seismic Provisions for Structural Steel Buildings* and all previous versions of the standard.

The new seismic standard has been approved by the AISC Committee on Specifications and is ANSI-accredited. It includes updated seismic design provisions and provisions on two new systems—buckling-restrained braced frames and special plate shear walls. It also incorporates both allowable stress design (ASD) and load and resistance factor design (LRFD) methods.

A more complete description of the new provisions is available in the "Preface to the Provisions" section of the standard. Download your copy today at **www.aisc.org/2005seismic**.

Cross-References for the 2005 AISC Specification Available for Download

A new cross-reference list to accompany the 2005 AISC *Specification for Structural Steel Buildings* (ANSI/AISC 360-05) can be downloaded from **www.aisc.org/2005spec**. This list compares the 2005 specification's table of contents to corresponding sections of past specifications, where applicable. Cross-references are given for the five standards that the 2005 specification replaces, including:

- 1989 *Specification for Structural Steel Buildings–Allowable Stress Design and Plastic Design*
- 1989 *Specification for Allowable Stress Design of Single-Angle Members*
- 1999 *Load and Resistance Factor Design Specification for Structural Steel Buildings*
- 2000 *Load and Resistance Factor Design Specification for Steel Hollow Structural Sections*
- 2000 *Load and Resistance Factor Design Specification for Single-Angle Members*

The organization of the 2005 specification is very similar to both the 1989 ASD specification and the 1999 LRFD specification; however, major changes occur in the content of the appendices. Criteria for single-angle and hollow structural sections (HSS) are intermingled in the new specification's various design chapters, with a new chapter (Chapter K) covering HSS connection design exclusively. These changes and additions, among others, are noted in the cross-reference list, available at **www.aisc.org/2005spec**.

CONTINUING EDUCATION

AISC Continuing Education First Quarter Seminars

AISC's Continuing Education Department will offer two seminars in the first quarter of 2006: "Design Steel *Your* Way with the 2005 AISC Specification" and "Seismic Braced Frames—Design Concepts and Connections."

"Design Steel *Your* Way with the 2005 AISC Specification" will accelerate your ability to design steel buildings according to the 2005 *Specification for Structural Steel Buildings*, whether you design in ASD or LRFD. Presentation topics will include proper material selection, design philosophies and analysis requirements, member and structure stability provisions, member design, and connection design. This seminar also includes extensive handouts: Each attendee will receive a copy of the course notes and design examples, the AISC *Design Examples* CD, and a copy of the 13th Edition AISC *Steel Construction Manual*, which includes the 2005 AISC specification, the 2004 *RCSC Specification*, and the 2005 *Code of Standard Practice for Steel Buildings and Bridges*.

This year's specification seminars also include "extras" available only to attendees. Each attendee will receive laminated copies of the Basic Design Values cards—two 5×8" cards that include the most-used information from the 2005 AISC specification, in both ASD and LRFD. With these cards, users can design all typical beams, columns, braces, tension members, and connections and perform simplified analyses. Specification seminar attendees will also be eligible to win an Apple iPod Nano—one per session—courtesy of AISC Quality Certification.

The seismic braced frames seminar is a full-day seminar that concentrates specifically on design of seismic braced frames. The course will focus on the design requirements in the 2005 AISC *Seismic Provisions for Structural Steel Buildings*. For those proficient with the 2002 AISC seismic provisions, the seminar will highlight the differences between the 2002 and 2005 editions, and the implications of these changes in their design. (Look for another seismic design seminar, "AISC Seismic Design—Updates and Resources for the 21st Century," later in 2006.)

AISC also continues to offer the "Bring a Buddy" program. If eligible, paid registrants may add one person to their registration at a reduced rate. And, as always, AISC members attend at discounted rates. To become a member and receive the AISC member discount, please visit **www.aisc.org/membership**. Call 800.809.2364 or visit **www.aisc.org/2006seminars** for more information on each seminar or to register.

UNIVERSITY EDUCATION

Steel Conference Stipend for Educators

Are you an educator thinking of attending NASCC: The Steel Conference, but travel funds are low at your university? AISC's University Relations Department will assist educators with a $250 stipend to attend this year's Steel Conference. The stipend can be applied to the $125 educator conference registration fee and travel expenses.

This year's conference will take place February 8–11 in San Antonio, TX. The annual educator session will be held Wednesday, February 8 and will feature a presentation of new AISC teaching aids, including writing assignments for steel design courses. This session will also feature an introduction to forthcoming improvements to the University Relations section of the AISC web site, which includes resources for web enhanced teaching (WET) of structural steel design.

Information about this and other 2006 NASCC sessions can be found at **www.aisc.org/nascc**. More information about opportunities for educators can be found in the "Learning Opportunities" section of AISC's web site at **www.aisc.org**. To inquire about your eligibility for this stipend, please contact Fromy Rosenberg at 312.670.5408 or rosenberg@aisc.org; or Megan Maurer at 312.670.5418 or maurer@aisc.org.

New AISC Seminar Debuts

AISC Continuing Education will debut its newest full-day seminar in conjunction with the 2006 North American Steel Construction Conference. "Design Steel *Your* Way with the 2005 AISC Specification" will be offered for the first time as a short course on February 11, 2006 in San Antonio, TX during the Steel Conference. Throughout 2006, the seminar will be presented in approximately 60 cities across the United States.

Whether you design in ASD or LRFD, this seminar will accelerate your ability to design steel buildings according to the 2005 AISC *Specification for Structural Steel Buildings* and the 13th Edition *Steel Construction Manual*. You will gain valuable insight into:

- The 2005 specification, which unifies ASD and LRFD into a single method and includes the specifications for single angles and hollow structural sections
- The Basic Design Values cards—two 5×8" cards that distill the most widely needed and often used specification provisions
- The *Manual*, which presents design aids for ASD and LRFD side by side for ease of use
- The *Design Examples* CD, which provides an illustration for each of the *Specification* provisions, as well as examples illustrating the use of all tables in the *Manual*.

Presentation topics will include proper material selection, design philosophies and analysis requirements, member and structure stability provisions, member design, and connection design. This is the AISC seminar you've been waiting for!

In addition, AISC will continue to offer in 2006 the popular seminar "Seismic Braced Frames—Design Concepts and Connections" in select cities throughout the Midwest and eastern United States.

Look for the full seminar schedule, available soon, at **www.aisc.org/seminars**.

WORLD STEEL BRIDGE SYMPOSIUM WRAP-UP

Time for Steel; Steel for Time

BY LENA SINGER

AS A YEAR MARKED BY NATURAL DISASTER AND STRUCTURAL DESTRUCTION IN THE UNITED STATES GULF COAST REGION CAME TO A CLOSE, NEARLY 400 BRIDGE BUILDING AND DESIGN PROFESSIONALS MET TO DISCUSS THE TIMELESSNESS OF STEEL BRIDGE CONSTRUCTION.

Bridge industry designers, fabricators, contractors, and product manufacturers, as well as representatives of state and federal departments of transportation, gathered in Orlando, FL November 28 through December 2, 2005 for the biennial World Steel Bridge Symposium, hosted by the National Steel Bridge Alliance (NSBA) and the Federal Highway Administration (FHWA).

The theme of this year's symposium, "Time for Steel; Steel for Time," was chosen not only to reflect steel bridges' strength and life-cycle advantages, but also to emphasize their economic and aesthetic value, according to NSBA Executive Director Conn Abnee. In light of the structural damages that occurred on the U.S. gulf coast in late 2005, Abnee said that steel is now more than ever the material of choice for bridges designed to last.

NSBA Executive Director Conn Abnee (left) and Vasant Mistry, Senior Steel Bridge Engineer for the Federal Highway Administration.

"Steel stands the test of time," Abnee said. "It has aesthetic beauty and it is competitive. And even more advantages come to the fore when you consider life-cycle costs, which is how all transportation infrastructure should be evaluated."

The symposium's varied sessions focused on both technical topics and current issues in steel bridge design and construction.

"The symposium blended all of NSBA's initiatives by including technical elements with public and trade awareness and legislative issues to promote the market share of steel bridges," Abnee said. "All of the sessions worked collectively in making the conference a total experience."

Symposium attendee Adnan Alghita's thoughts on the symposium echoed this sentiment. Alghita, of Adnan Investment and Development, Inc. general contractors, hopes to move his business toward civil engineering planning. Alghita said he found value in each of the sessions he attended, regardless of the topic, for this reason.

"The sessions are all components of the total picture," he said.

Andrew Pott, design engineer for the Colorado Department of Transportation, said he found the symposium's sessions on prefabricated bridge elements and accelerated bridge construction technologies to have valuable information for state departments of transportation (DOTs).

"I think it's important to get this information out to the state DOTs," said Pott. "I'm going to be recommending that our bridge engineers put accelerated construction technology transfer into our process."

"Some of the design technologies have not been used yet in Oklahoma," said Susan Tryon, bridge engineer for Benham Companies, Inc. in Tulsa, OK, "but there are places where they could be applicable—the wheels are turning."

Other symposium sessions addressed bridge design research and analysis, orthotropic decks, curved girders, facture critical, large-scale construction, solutions to framing challenges, and aesthetics.

Frederick Gottemoeller, Principal of Bridgescape LLC, discussed the difference between enhancements such as paint, lighting, railings and "true" aesthetic quality in bridges, which he says is the result of engineering.

"The true goal of bridge aesthetics is good engineering," Gottemoeller told the audience. "As engineers, we need to reaffirm that good aesthetics is good engineering."

Jim Rasenberger, author of *High Steel: The Daring Men Who Built the World's Greatest Skyline*, presented attendees with a historical discussion of American steel bridges from the perspective of the iron workers who built them.

"What you do is part of a long American epic," Rasenberger told attendees.

Rasenberger said he is amazed by the amount of innovation that had to occur before the steel structures of the twentieth century to be realized.

"The story of steel structures is a fascinating story, particularly steel bridges," he said following the lecture.

The general sessions also included in-depth looks at the designs of the some of world's premier steel bridges constructed in recent years, including the Cooper River Bridge in South Carolina, which features the longest cable stay span in the Americas; the Dagu Bridge in Tianjin, China, which employed innovative methods for structural stability in a site with high seismicity and soft soil; and the Hunts Bay bridge in Kingston, Jamaica, which was constructed through incremental launching.

Between sessions, attendees had access to more than 50 exhibitors showcasing products specific to bridge design and construction.

"Our sales managers had an opportunity to meet the people they talk to on a day-to-day basis, as well as [to] people involved in new projects," said Brian Mergenthaler, National Sales Manager of U.S. Bridge Company, a pre-fabricated bridge company.

The symposium drew to a close with the WSBS banquet and presentation of the NSBA Prize Bridge Awards. Executive Director Abnee presented distinguished guest Congressman John L. Mica, of the Seventh Congressional District of Florida and member of the House Committee on Transportation and Infrastructure, with a plaque in appreciation of his continued efforts in support of the United States steel bridge industry.

"I was amazed by the extraordinary steel bridge designs honored at tonight's awards dinner," Congressman Mica said. "It is easy to see why they have become sources of pride for their communities."