

IN MEMORIAM

Fred Brown, Jr., Former AFCO President, Dies at 90

Frederick Isaac Brown, Jr., former president of AFCO Steel (now W&W/AFCO Steel, an AISC member and AISC certified fabricator), died peacefully at his home on February 9, surrounded by family and friends. He was 90 years old.

Fred I., as he was often referred to by friends, attended the University of Arizona where he was an active member of the Sigma Alpha Epsilon fraternity and served as a cadet in one of the last ROTC cavalries before horses ceased to be a regular part of military equipment. He competed in the school's award-winning rodeos and graduated with a bachelor's degree in mathematics in 1943.

After graduating from college, he served for three years in Midshipmen's School. He was commissioned as an Ensign, USNR in January 1944 where he volunteered for duty with the U.S. Navy's "Beach Jumpers" unit (commanded by Lieutenant Douglas Fairbanks, Jr.) during World War II. This unit operated under Top-Secret orders to prepare for a diversionary landing on southwestern Kyushu Island, Japan. The dropping of the atom bomb changed the mission, and his unit was assigned to the 43rd Sunrise Army Division in Hiroshima.

After being discharged from the Navy

as a communication officer aboard the USS *Aclyone*, Brown worked as a stove tender in the Blast Furnace Division of Inland Steel in Indiana Harbor, Ind., then attended the Massachusetts Institute of Technology where he graduated with a bachelor's degree in metallurgy in 1949.

Following the death of his father in 1962, Brown became president and CEO of AFCO Steel in Little Rock, Ark. The company was recognized as a leading structural steel fabricator in the U.S. and was sold in 2002 to W&W Steel.

Brown was also appointed to the Little Rock Port Authority at its inception in 1960. He became Chairman in 1965, a position he held for more than 20 years, and oversaw the development of a 1,500-acre industrial park, a short-line railroad and an operating river port. In 1969, the towboat *Arkansas Traveler* chugged into the port with the first two barges loaded with steel. About 20 years later the Little Rock Board of Directors named the port's slack water harbor the "Fred I. Brown, Jr. Industrial Harbor" in recognition of his dedication to the McClellan-Kerr Navigation Plan for the Arkansas River.

Brown is survived by his wife of 62 years, Patricia, five children and 10 grandchildren.

AISC VOLUNTEERS

Prominent AISC Volunteers Earn Membership to National Academy of Engineering

Two distinguished AISC volunteers were recently elected members of the National Academy of Engineering (NAE). Gregory G. Deierlein, a professor in the department of civil and environmental engineering and John A. Blume Professor in the School of Engineering at Stanford University, was elected for his development of advanced structural analysis and design techniques and their implementation in design codes. William A. Thornton, a corporate consultant with AISC member

and certified fabricator Cives Engineering Corp., was elected for his rational methods of designing steel connections as well as for leadership in steel building design.

NAE membership honors those who have made outstanding contributions to "engineering research, practice or education" and to the "pioneering of new and developing fields of technology, making major advancements in traditional fields of engineering or developing/implementing innovative approaches to engineering education."

CORRECTION

In the February article "Winning Big," which features the FireKeepers Casino Hotel in Battle Creek, Mich., AISC member bender-roller Chicago Metal Rolled Products should have been listed.

People and Firms

- The **American Galvanizers Association (AGA)** has developed a new white paper, *Zinc in the Water Environment*, to address the growing misconceptions about zinc from galvanized steel elements in storm water runoff. The white paper includes six case studies of galvanized bridges and docks in aquatic environments, examining the corrosion rate of zinc during storm events. In each study, the addition of zinc to the water environment is not high enough to cause toxicity to aquatic organisms and, in fact, is at least 100 times less than the permissible level of zinc in drinking water. You can download the full white paper at www.galvanizeit.org/zincinwater.
- **JMC Steel Group** announced that CEO **Frank A. Riddick III** has left the company to pursue other matters and that **Barry Zekelman**, executive chairman, has returned to the office of CEO. In 2006, during his initial stint as CEO, chairman and president of AISC member **Atlas Tube**, Zekelman merged Atlas with JMC; under his leadership, JMC has become the largest independent manufacturer of pipe and tube in North America.
- A new professional organization geared specifically toward women in construction operations—**Women in Construction Operations** or **WiOPS**—was recently formed by a group of women from multiple Southern California construction, architecture and engineering companies. The primary goal of the group, co-chaired by **Sarah Creighton** and **Holly Cindell** of **McCarthy Building Companies, Inc.**, Newport Beach, is to facilitate mentorship of up-and-coming women in the AEC world. For more information visit www.womeninoperations.com.

PROJECT NEWS

Kansas City Area to See Major Steel Projects Open this Year

Doherty Steel, Inc., Paola, Kan. (AISC Member/AISC Certified Fabricator and Erector), provided steel for a trifecta of recent projects going up in the Kansas City, Mo., area: an office building, a school and a mixed-use office/hotel facility.

The office facility is a new headquarters building for Freightquote, the largest online freight shipping broker in the U.S. The company, which has approximately 1,200 employees nationwide and moves more than one million shipments annually across North America, is nearing completion on its new 200,000-sq.-ft office facility.

Designed by Opus AE Group, Inc., the structure uses a braced composite steel frame comprised of 800 tons of structural steel and 2,000 squares of composite deck. Construction on the project, which is located roughly 10 miles south of downtown Kansas City, began late last summer and is scheduled to be completed in May.

The second project is the new home of the Ewing Marion Kauffman School, located on a 13-acre site about five miles north of the Freightquote project. The new school will serve more than 1,000 middle and high students.

The project was divided into four areas, and Doherty was recently awarded a contract to fabricate and erect structural and miscellaneous steel for two of these areas (the gym and cafeteria and the renovation/expansion of an existing middle school building). The company plans to fabricate and erect 525 tons of fabricated structural steel and 46 tons of miscellaneous steel within 22 weeks; shop drawings are going through the approval process.

Designed by Perkins and Will, the project is using a building information modeling (BIM) approach and all primary and secondary steel members will be modeled, including standard steel member sizes, gusset plates, braces and kickers. The drawings will be imported into one file, using Navisworks, and reviewed during the coordination meetings. The campus is expected to open in time for the 2013 school year.

A couple of miles northwest of the Kauffman School, Project 4840, the third project, topped out last June.

“This was a very significant day for

Doherty Steel because we had successfully fabricated and erected one of the most talked-about construction projects in recent memory in the Kansas City market,” said Kahn Hakman, business development manager with Doherty.

Project 4840 is located in the former West Edge development—which was only partially completed before coming to a halt thanks to financial difficulties—near Kansas City’s Country Club Plaza. The new development, comprised of two towers and designed by 360 Architecture, will play home to a law firm (the primary tenant) and will also include renovations to an existing hotel. Doherty Steel fabricated and erected 1,438

tons of structural and miscellaneous steel for work on both towers. The project involves tearing down a half-constructed concrete tower and replacing it with a new steel-framed 10-story 253,000-sq.-ft office tower, as well as providing an infill package for the seven-story hotel tower.

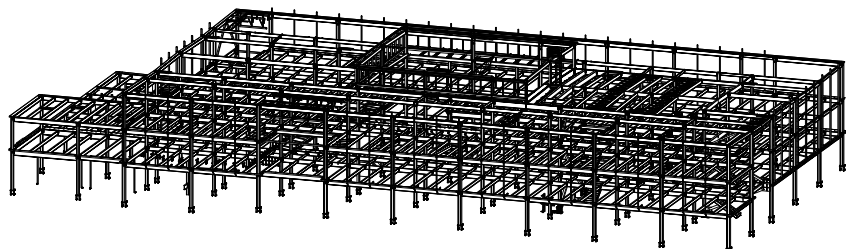
“Two tower cranes were used to set the steel on this very tight project site,” said Hakman. “It had to be sequenced and delivered precisely to make the 55-day erection schedule. We accomplished this by working six 10-hour days a week with about 40 ironworkers on-site.”

The entire project is expected to be completed by November.



- ▲ The new Freightquote headquarters.
- ◀ Project 4840.
- ▼ A 3D structural model of the new Kauffman School.

All images courtesy of Doherty Steel



BRIDGES

SDMI Publishes High-Performance Steel Bridge Spec

The Steel Market Development Institute (SMDI), a business unit of the American Iron and Steel Institute (AISI), has published the *Guide Specification for Highway Bridge Fabrication with HPS 100W (HPS 690W) Steel for Non-Fracture Critical Applications*. The document, available for free download at www.smdisteel.org, provides bridge owners, designers and fabricators with the latest

recommended methodology to fabricate and weld structures using ASTM A709 or AASHTO M270, Grade HPS 100W (HPS 690W) steel. The first HPS 70W bridge was placed in service in December 1997 and SDMI estimates that there are now more than 450 HPS bridges in service in 44 different states.

The guide is based on continued research with high-performance steel

(HPS) fabrication and welding practices conducted under a cooperative agreement sponsored by the Federal Highway Administration, the U.S. Navy and SMDI. The guide includes certain consumables for the submerged arc welding (SAW), shielded metal arc welding (SMAW), flux cored arc welding (FCAW) and gas metal arc welding (GMAW) processes.

PUBLICATIONS

Engineering Journal Celebrates 50 Years of Publication

AISC's *Engineering Journal* celebrates a half-century of publication this year.

AISC started *EJ* in 1964 as a means of communicating practical technical information to its membership. The first issue included articles from the great minds of Lev Zetlin (steel cables used to create "structural space systems"), T.R. Higgins (the then-new concept of effective length factors for columns) and

Ted Galambos (lateral support to prevent sidesway buckling).

Over the years *EJ* has expanded in scope to include coverage of contemporary steel research, but it continues to provide practical technical information reviewed by industry peers.

The first quarter 2013 issue of *EJ* is now available. You can view, print and share the current digital edition, search the complete

collection of *EJ* articles and download current and past articles in PDF format at www.aisc.org/ej (AISC members and ePubs subscribers can download articles for free; non-AISC members must subscribe).

Is there a steel design topic that you would like to see addressed in more detail? *EJ* is always looking for your ideas. E-mail them to Keith Grubb, Editor, at grubb@aisc.org.

PROJECTS

World's Tallest Modular Building Breaks Ground

Following the successful completion of the Barclays Center—home of the NBA's Brooklyn Nets—Banker Steel (an AISC member/AISC certified fabricator) is partnering with Forest City Ratner Companies (FCRC) and Skanska on the construction of the B2 prefabricated steel tower at the Atlantic Yards development site in Brooklyn, N.Y.

At 32 stories, B2 will be the world's tallest modular high-rise building and is one of 15 planned structures at the \$4.9 billion, 22-acre Atlantic Yards site. The structure will be comprised of 4,000 sq. ft of retail space as well as 362 residential units, of which almost 50% will be priced as affordable housing for low-to-middle income residents.

"The modular construction that will be used for B2 has the potential to really change the way cities are built," said New York City Mayor, Michael Bloomberg.

With approximately 60% of con-

struction being completed off-site and under-roof, it is estimated that B2 will weigh only about half as much as a traditional steel building, cost 30% less to build and take significantly less time to complete, according to Banker Steel. In addition to requiring less labor, material and erection time, this process will be safer, cause minimal disruption to the surrounding neighborhoods during construction and be environmentally friendly; construction site waste is expected to be reduced by as much as 90%.

"The immense precision and detail that we've put into engineering and building these modules has created a universal concept that will allow high-rise buildings to be completed in a time frame unrealized by conventional methods," said Don Banker, CEO and owner of Banker Steel. "This design concept, exemplified by the B2 Towers, will ultimately change how we

view and build residential and commercial buildings."

Banker Steel has expanded one of its Lynchburg, Va., facilities by an additional 45,000 sq. ft to create a workshop that is solely dedicated to the fabrication of these modules. The company has hired new employees to meet the initial production demand, with the possibility of further hires, as needed, later in the year.

B2 is expected to be available for occupancy in the summer of 2014.



Jacinda Collins

▲ One of the structural modules for B2.