

## editor's note



**TWENTY YEARS AGO, I REMEMBER SITTING NEXT TO RAM STEEL'S GUS BERGSMA IN A HOTEL CONFERENCE ROOM IN CHICAGO DURING NASCC: THE STEEL CONFERENCE AND SEEING A DEMONSTRATION OF DATA INTERCHANGE THROUGH SOMETHING CALLED "CIMSTEEL."** We looked at each other and knew we were seeing the future of design and construction.

A few weeks ago I sat in another conference room in Chicago, this time at AISC's Fall Forum, and heard a presentation from Jon Magnusson of Magnusson Klemencic Associates—and knew it was another game-changer. His presentation was on the future of design and construction and covered ideas ranging from elevators that can move both vertically and horizontally (remember the Wonkavator from *Willy Wonka and the Chocolate Factory*?) to the use of augmented reality.

And while all of the topics he discussed will undoubtedly impact the future, the biggest impact will be from the development of a high-performing and cost-efficient composite coupled core wall system. The system shaves months off the construction schedule—and reduces costs—compared with a concrete core system. And most importantly, the new system performs spectacularly.

MKA is using it on a new mixed-use office and residential tower in Seattle, and the firm's studies, spearheaded by its own Ron Klemencic (who led the development of the system), show a reduction of 136 calendar days for the steel-core building versus a typical steel-framed building with a concrete core.

The system provides the strength, stiffness, safety and serviceability of a reinforced concrete core without the negatives of rebar congestion and complex formwork. In addition, using the system means the entire structure

is built to the tight tolerances standard in steel construction, rather than the broader tolerances permitted in concrete construction.

Time is saved by eliminating the installation of rebar and the construction of formwork. And without the need to wait for the concrete to cure, the core and perimeter steel can rise in tandem, resulting in much faster erection.

And the system is not just for use in seismic areas. "There is a great potential for the use of coupled composite steel plate shear walls in wind-controlled buildings," added Larry Kruth, AISC's vice president of engineering and research. "In fact, MKA's project in Seattle, where the CCSPSW will be used first, is a wind-controlled design. The other potential is not just for high-rise structures. This system is very desirable for use in low-rise structures due to its speed of construction enabling the schedule to be shortened."

According to Magnusson, "This system represents the greatest innovation in steel in high-rise buildings in decades."

I urge you to sit in a conference room at the 2018 NASCC: The Steel Conference (Baltimore, April 11–13), listen to Purdue's Amit Varma and MKA's Ron Klemencic and learn more about the system.

  
**SCOTT MELNICK**  
EDITOR

## Modern STEEL CONSTRUCTION

### Editorial Offices

130 E Randolph Street, Suite 2000  
Chicago, IL 60601  
312.670.2400

### Editorial Contacts

#### EDITOR AND PUBLISHER

Scott Melnick  
312.670.8314  
melnick@modernsteel.com

#### SENIOR EDITOR

Geoff Weisenberger  
312.670.8316  
weisenberger@modernsteel.com

#### ASSISTANT EDITOR

Tasha O'Berski  
312.670.5439  
oberski@modernsteel.com

#### DIRECTOR OF PUBLICATIONS

Keith A. Grubb, SE, PE  
312.670.8318  
grubb@modernsteel.com

#### PRODUCTION COORDINATOR

Erika Salisbury  
312.670.5427  
salisbury@modernsteel.com

#### GRAPHIC DESIGN MANAGER

Kristin Hall  
312.670.8313  
hall@modernsteel.com

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Renae Gurthet  
231.995.0637  
renae@gurthetmedia.com

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subscriptions@aisc.org

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Erika Salisbury  
312.670.5427  
salisbury@modernsteel.com