

editor's note



I'VE SEEN THE FUTURE.

For most of my career, I've witnessed incremental changes to the design and fabrication industries. Be it advancements in seismic design or the advent of information modeling, it seemed that each year we saw small changes that only over a decade or more had a big impact.

But today, we're on the cusp of realizing two advancements that will truly revolutionize design and fabrication.

On the design side, there's a building under construction in Seattle that is ushering in a new era of high-rises. For the past two or three decades, the most common system for high-rise buildings was a concrete core with steel framing. While the concrete core had the benefit of providing stiffness, it had the disadvantage of slowing down construction.

But a new system being implemented by Ron Klemencic of Magnusson Klemencic Associates (MKA) is using a composite steel core (AISC is calling it a SpeedCore, www.aisc.org/speedcore) and slashing erection time by as much as 40%. The system is brilliant, revolutionary—and the future of design and construction. The best article to date is by my friend Nadine Post of *ENR*. The magazine has kindly given us permission to post the article on AISC's website, and you can view it at www.aisc.org/innovations.

Just as dramatic is what I saw recently at Prospect Steel (a division of Lexicon) down in Little Rock. The auto industry has long used robotic welding to speed car production, and structural steel fabricators

have long dreamed of doing the same. While car manufacturing is a purely repetitive task, structural fabrication, unfortunately, is not.

A little more than a year ago, Prospect installed a robotic fit-and-weld system from Zeman (see a couple of videos I shot at www.aisc.org/roboticwelding). The system automatically scans parts (such as doubler plates and stiffeners), picks them up in the sequence needed and robotically welds them to a beam or column. According to Prospect's president, John Bailey, the system reduces total fabrication time by more than 15% and fabrication costs by even more. And these aren't pie-in-the-sky numbers. These are based on actual job performance; it was estimated that the member in the video would have taken two welders four hours to complete while the robotic system processed it in just 40 minutes. While Zeman may have the most advanced robots today, they're not alone in trying to revolutionize the fabrication industry.

If you want to see the future too, make sure you come to this year's NASCC: The Steel Conference (April 11–13 in Baltimore). Among the more than 160 technical sessions is a talk by Ron Klemencic on the Seattle project and SpeedCore. And the 200 exhibitors include the latest in welding and fabrication technology (along with software, bolting and everything else related to the design and construction of steel buildings and bridges).

For more information and to register, visit www.aisc.org/nascc.


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