

News Release

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AISI PUBLISHES NEW REPORT ON LRFD AND LSD RESISTANCE FACTORS FOR COLD-FORMED STEEL COMPRESSION MEMBERS

WASHINGTON, D.C. - The American Iron and Steel Institute (AISI) has published a new research report on the recalibration of the Load and Resistance Factor Design (LRFD) and the Limit States Design (LSD) resistance factors for cold-formed steel compression members when the strength is predicted using the Direct Strength Method. Since the Direct Strength Method statistically provides a better strength prediction, higher resistance factors are realized. A summary of the project, findings and analysis are published in "RP10-5: LRFD and LSD Resistance Factors for Cold-Formed Steel Compression Members." A free download is <u>available here</u> (135 pages).

The research was conducted by Karthik Gaanesan and Cristopher D. Moen, Ph.D., from Virginia Polytechnic Institute and State University (Virginia Tech). It involved data from a total of 675 column tests with calculations performed based on AISI S100, North American Specification for the Design of Cold-Formed Steel Structural Members, and the Direct Strength Method. The resistance factors for different cross-section types and ultimate limit states were investigated.

"The research demonstrated that the Direct Strength Method provides a better strength prediction and the improved resistance factors allow for more competitive designs," said Jay Larson, P.E., F.ASCE, managing director of AISI's Construction Technical Program. "This research provided a basis for us to make revisions to AISI S100 in 2016, which facilitated the adoption of the LRFD improvements in the 2018 International Building Code (IBC) and will allow adoption of the LSD improvements in the next edition of the National Building Code of Canada (NBC). It also identified opportunities for additional research."

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AISI's codes and standards work is conducted under the Construction Market Council of the Steel Market Development Institute (SMDI), a business unit of AISI, which increases and defends the use of steel by developing innovative materials, applications and value-added solutions for customers in the automotive, construction and packaging markets. SMDI investors include: <u>AK Steel Corporation</u>, <u>Algoma, ArcelorMittal</u>, <u>Nucor Corporation</u> and <u>SSAB Americas</u>. For more information on SMDI's Construction Market program, visit <u>www.buildusingsteel.org</u>. Follow SMDI Construction on Twitter <u>@BuildUsingSteel</u>.

AISI serves as the voice of the North American steel industry in the public policy arena and advances the case for steel in the marketplace as the preferred material of choice. AISI also plays a lead role in the development and application of new steels and steelmaking technology. AISI is comprised of 21 member companies, including integrated and electric furnace steelmakers, and approximately 120 associate members who are suppliers to or customers of the steel industry. For more news about steel and its applications, view AISI's website at www.steel.org. Follow AISI on Facebook or Twitter (@AISISteel).

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