New and Revised Cold-Formed Steel Framing Standards Published

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In early 2007, the AISI Committee on Framing Standards gained approval by the American National Standards Institute (ANSI) of a new North American Standard for Cold-Formed Steel Structural Framing – Product Data, and updated North American editions of its standards on General Provisions, Header Design, and Truss Design. These documents have completed AISI editorial and administrative review, and have been published by the Steel Framing Alliance as American National Standards.

AISI Framing Standards

A most noteworthy change is that these are North American standards, intended for adoption and use in Canada and Mexico, as well as the United States. Also, a new numeric designation system has been introduced to better reference the documents in codes and specifications. These are just the first four standards in a series that will be released by the AISI Committee on Framing Standards during 2007.

AISI S200-07 is the new designation for the revised Standard for Cold-Formed Steel Framing – General Provisions. In this new edition, definitions for terms in all the various AISI standards for cold-formed steel framing have been centralized to assure consistency and better facilitate maintenance of the standards. Language was added to clarify that a dissimilar metal may be used in direct contact with steel framing members if approved for that application, and commentary language was added to provide guidance on when such applications are appropriate. The minimum base metal thickness table was removed, and the thickness requirements now defer to an approved design or recognized product standard, such as the new Product Data standard, AISI S201 (discussed below). A requirement was added for specifying material for use in structural applications – the material used in design is identified on contract documents and when ordering the material. Referenced document and product identification requirements were updated. Based on recent research, commentary language was also added to provide guidance for both use of load bearing top track assemblies and wall stud gap tolerances. AISI S201-07 is the designation for the new Standard for Cold-Formed Steel Framing – Product Data. This standard is intended to establish and encourage the production and use of standardized products in the United States, Canada, and Mexico. It provides criteria, including material and product requirements for cold-formed steel C-shaped studs, joists, track, U-channels, furring channels, and angles intended to be utilized in structural and non-structural framing applications. It defines standard material grades and specifications, minimum base steel and design thickness, and coatings for corrosion protection. It also defines standard product designators, shapes, inside bend radii, lip lengths, punchouts, markings, and manufacturing tolerances. This standard requires a properly documented quality control program and the proper application of quality assurance procedures.

AISI S212-07 is the new designation for the revised Standard for Cold-Formed Steel Framing – Header Design. In this new edition, the referenced document listing was updated, requirements for evaluating shear were added for back-to-back and box headers, and provisions were included for designing inverted L-header assemblies, based on rational engineering judgment, as a means to provide improved capacity for double and single L-Headers.

AISI S214-07 is the new designation for the revised Standard for Cold-Formed Steel Framing – Truss Design. In this new edition, the referenced document listing was updated, and the standard and commentary were revised to clarify when members are to be evaluated for axial load alone, bending alone, combined axial load and bending, and clarify requirements for trusses with C-shaped chord and web members. Provisions for designing gusset plates were added based on a recent testing program. The required minimum number of test specimens for the full-scale structural performance load test was changed from two to three, and the special beta-factors for trusses were deleted and the user is deferred instead to AISI S100 [CSA S136], the North American Specification for the Design of Cold-Formed Steel Structural Members.

Work by the AISI Committee on Framing Standards continues on North American editions of its standards on Lateral Design and Wall Stud Design, along with a new North American standard on Floor and Roof System Design. An updated Prescriptive Method for One- and Two-Family Dwellings is also being developed. These documents will provide a suite of state-of-the-art documents, which are intended to enable, encourage, and sustain growth of the cold-formed steel structural framing industry. These documents can be purchased from the Steel Framing Alliance either online (www.steelframing.org) or by phone (toll-free 1-866-465-4732). For more information on the AISI Committee on Framing Standards, please contact Jay Larson, AISI Director of Construction Standards Development (jlarson@steel.org).

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