
ERRATA & ADDENDUM

AISC LRFD Rules for Block Shear in Bolted Connections—A Review

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ERRATA

On page 199, Equation 2 should be written as follows:

$$\begin{array}{ll} \text{and if} & (0.6 \sigma_u) A_{nv} > \sigma_u A_{nt} \\ \text{then} & R_n = (0.6 \sigma_u) A_{nv} + \sigma_y A_{gt} \end{array} \quad (2)$$

ADDENDUM

After this paper had gone to press, Professor J. A. Yura pointed out to the authors in private correspondence that they had incorrectly interpreted some of the University of Texas test results (Yura, Birkemoe, and Ricles, 1982) as block shear. A few tests that the authors called block shear were, in fact, other failure modes. Also, some of the Texas

tests had been reported in two places, Yura et al. (1982) and Ricles and Yura (1983). Table 1, from the 4th Quarter 2001 paper, has been revised to reflect this information. In the entry for Aalberg and Larsen in Table 1, the ratio Test/Proposed was reported incorrectly in the paper, and this correction has been made. Additionally, a series of 17 tests done at the University of Alberta were completed after the paper had gone to press. These will appear as Franchuk, C., Driver, R. G. and Grondin, G. Y., "Block Shear Failure of Coped Steel Beams," *Proceedings*, 2002 CSCE Annual Conference, Montreal, June 2002. These tests have been added to Table 1, which greatly increases the data pool for coped beams. The number of coped beam tests in the 4th Quarter 2001 paper was 21 (really 19 because of the authors' mistake in accounting for the Texas data), and it is now 36.

The conclusions reached in the paper with respect to coped beams are still valid.

Table 1 Revised—Block Shear Examination for Selected Cases

Source	Type	No. Tests	Test LRFD	Test Proposed	Comments
Hardash and Bjorhovde (1985)	Gusset Plates	28	1.22 (0.08)	1.16 (0.06)	Hardash and Bjorhovde also reported on three other test series totaling 14 tests. These are not included herein.
Rabinovitch and Cheng (1993)	Gusset Plates	4	1.22 (0.07)	1.01 (0.06)	
Nast, et al. (1999)	Gusset Plates	3	1.35 (0.02)	1.04 (0.01)	
Udagawa and Yamada (1998)	Gusset Plates	73	1.18 (0.05)	1.04 (0.09)	Out of 219 test specimens, 73 failed by block shear. Three steel grades were investigated.
Swanson and Leon (2000)	Gusset Plates	1	1.18	0.97	
Ricles and Yura (1983)	Coped Beams	7	0.71 (0.08)	1.02 (0.10)	Two lines of bolts, number of bolts per line not necessarily equal, one test used slotted holes.
Aalberg and Larsen (2000)	Coped Beams	8	1.13 (0.08)	1.20 (0.24)	One line of bolts.
Yura et al. (1982)	Coped Beams	3	1.04 (0.10)	1.23 (0.13)	One line of bolts, one test used slotted holes, bolts spread over most of the beam web depth.
Birkemoe and Gilmor (1978)	Coped Beams	1	0.95	1.17	One line of three bolts. Connected depth relatively small portion of beam depth.
Franchuk et al. (2001)	Coped Beams	17	1.06 (0.12)	1.16 (0.07)	One and two lines of bolts with different spacing.
Orbison et al. (1999)	Single Angles and Tees	12	1.12 (0.07)	1.06 (0.05)	One line of bolts.
Gross et al. (1995)	Single Angles	13	0.96 (0.05)	0.90 (0.07)	One line of bolts.
Barthel et al. (1987)	Single Angles	13	1.01 (0.01)	0.87 (0.04)	One line of bolts.
Epstein (1992)	Double Angles	3	0.80	0.80	Two lines of bolts. The standard deviation is not reported because only the average of the triplicate tests was available.

Notes: 1. Values of the ratio Test/LRFD greater than unity are conservative. LRFD value is calculated using resistance factor equal to 1.0.
2. Number in parentheses is standard deviation.