CORRECTION

Strength and Serviceability of Hanger Connections

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In Equations 1, 3, 4, and 6, b should be replaced by b'. Thus

$$\alpha_y' \frac{1}{\delta(1+\rho)}\left[\frac{4B_y b'}{pt^2F_y} - 1\right] \quad (1)$$

$$\text{If } 0 < \alpha_y' \le 1,\ T_y = \frac{pt^2F_y}{4b'}(1 + \delta\alpha_y') \quad (3)$$

$$\alpha_u' = \frac{1}{\delta(1+\rho)}\left[\frac{4B_u b'}{pt^2F_u} - 1\right] \quad (4)$$

$$\text{if } 0 < \alpha_u' \le 1,\ T_u = \frac{pt^2F_u}{4b'}(1 + \delta\alpha_u') \quad (6)$$

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In Table 2, α_y should be α_y' and α_u should be α_u'.

Table 2.
Douty and McGuire *T*-Stub Tests—Theoretical and Actual Results (from Refs. 5 and 6)

Test No.	Computed Strength (Theoretical)								Actual Strength (Experimental)		Computed Failure Mode	Actual Failure Mode
	Bolts and Flange						Web					
	Yield			Ultimate			Yield	Ultimate	Yield	Ultimate		
	α_y'	T_y (kips)	P_y (kips)	α_u'	T_u (kips)	P_u (kips)	P_y (kips)	P_u (kips)	P_y (kips)	P_u (kips)		
A1	1.32	23.10	92.5	1.04, .69	40.2–43.5	161–174	128	273–279	88	176	Flange, Bolts	Bolt Fracture
A3	–.27	37.40	150.0	–.47, –.48	62.0	248	209	482–602	136	256	Bolts	Bolt Fracture
A4	–.48	37.40	150.0	–.53, –.58	59.0	236	264	510–638	140	219	Bolts	Nut Stripping
A5	2.70	23.40	93.4	2.57, 1.89	52.6–65.8	168–210	124	223–279	108	224	Flange	Flange
A7	–.10	58.75	235.0	–.27, –.39	102.0	408	217	482–602	180	392	Bolts	Bolt Fracture
A8	–.58	58.75	235.0	–.60, –.66	105.7	423	263	510–638	240	>404	Bolts	Did Not Fail[4]
A9	1.39	23.10	92.5	1.09, .73	40.2–44.3	161–177	128	223–279	96	177	Flange, Bolts	Bolt Fracture
A10	.30	32.90	132.0	.14, –.04	57.1–61.0	228–244	165	319–398	112	240	Bolts, Flange	Bolt Fracture
A11	–.28	37.40	150.0	–.43, –.50	67.1	247	209	482–602	—[5]	256	Bolts	Bolt Fracture
A12	–.50	37.40	150.0	–.56, –.60	59.7	239	264	510–638	140	245	Bolts	Bolt Fracture
A13	2.82	23.40	93.4	2.65, 1.95	52.6–65.8	168–210	124	223–279	108	228	Flange	Web
A14	.97	46.80	187.0	.62, .33	81.4–86.7	325–345	157	319–398	140	286[3]	Flange, Bolts, Web	Web[3]
A15	–.01	58.75	235.0	–.27, –.42	100.0	400	217	482–602	—[5]	404	Bolts	Bolt Fracture
A16	–.61	58.75	235.0	–.63, –.69	106.0	424	263	510–638	240	>404	Bolts	Did Not Fail[4]
B1	1.32	23.10	92.5	1.29, .89	40.2–47.9	161–192	128	223–279	100	202	Flange, Bolts	Bolt Fracture
B3	.51*	29.00*	116.0*	.15, –.03	57.6–62.0	231–248	165	319–398	93[6]	230	Bolts, Flange	Bolt Fracture
B4	.29	32.90	132.0	.12, –.05	56.5–60.0	226–240	165	319–398	96	228	Bolts, Flange	Bolt Fracture
B5	.29	32.90	132.0	.12, –.05	56.5–60.0	226–240	165	319–398	120	230	Bolts, Flange	Bolt Fracture
B6	.51*	28.70*	115.0*	–.05, –.16*	60.0	240	209[1]	482–602	100	254	Bolts	Bolt Fracture
B7	–.27	37.40	150.0	–.44, –.59	55.5	222	209	482–602	—	233	Bolts	Bolt Fracture
B9	1.35*	39.00*	156.0*	.25*, .07*	84.4*–92.5*	338*–370*	219[1]	482–602	140	348	Bolts, Flange	Bolt Fracture
B10	–.10	58.75	235.0	–.29, –.40	99.0	396	217	482–602	220	403	Bolts	Bolt Fracture
B12	1.35*	39.00*	156.0*	.28*, .09*	86.2*–94.0*	345*–376*	264[2]	510–638	160	378	Bolts, Flange	Bolt Fracture
B13	–.58	58.75	235.0	–.62, –.67	99.4	398	264	510–638	216	>404	Bolts	Did Not Fail

1. Based on F_y= 26.0 in *T* stub.
2. Based on F_y= 31.0 in *T* stub.
3. Imperfection in material.
4. Exceeded machine capacity of 404 kips.
5. No abrupt increase bolt tension. Separation point (yield point) is not clear.
6. Estimated from . 7 of Ref. 5.

* Indicates data based on non-rigid base.