

The specimen details

Diameter of bolt	d (mm)	20
Diameter of bolt hole	d_0 (mm)	22
End distance	e_1 (mm)	40
Edge distance	e_2 (mm)	30
Pitch distance	p_1 (mm)	60
	p_2 (mm)	N/A
Gauge distance	g (mm)	90
Thickness of end plate	t_p (mm)	10
Horizontal distance of lever arm	B_L (mm)	490
Vertical distance of lever arm	D_L (mm)	51.7

Steel Grade		S275	S355
Dimension of Members		UB305x16 5x40	UC254x25 4x89
Depth of Section	D (mm)	303.4	260.3
Width of Section	B (mm)	165	256.3
Thickness of Web	t (mm)	6	10.3
Thickness of Flange	T (mm)	10.2	17.3
Root Radius	r (mm)	8.9	12.7
Depth between Fillets	d (mm)	265.2	200.3

17 July 2007 Flexible Endplate Test Result

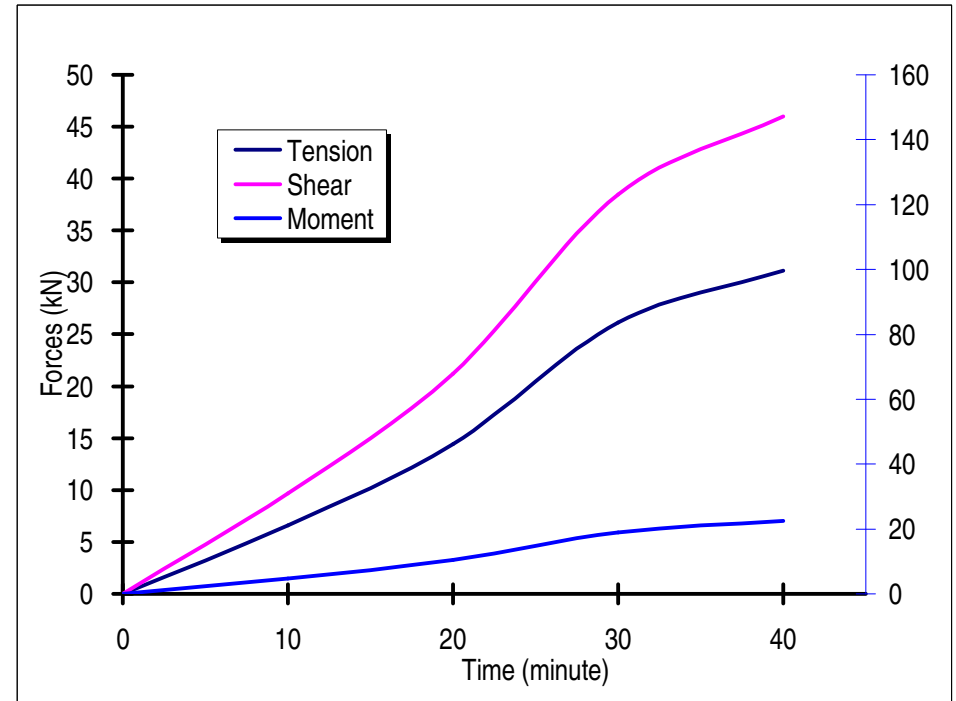
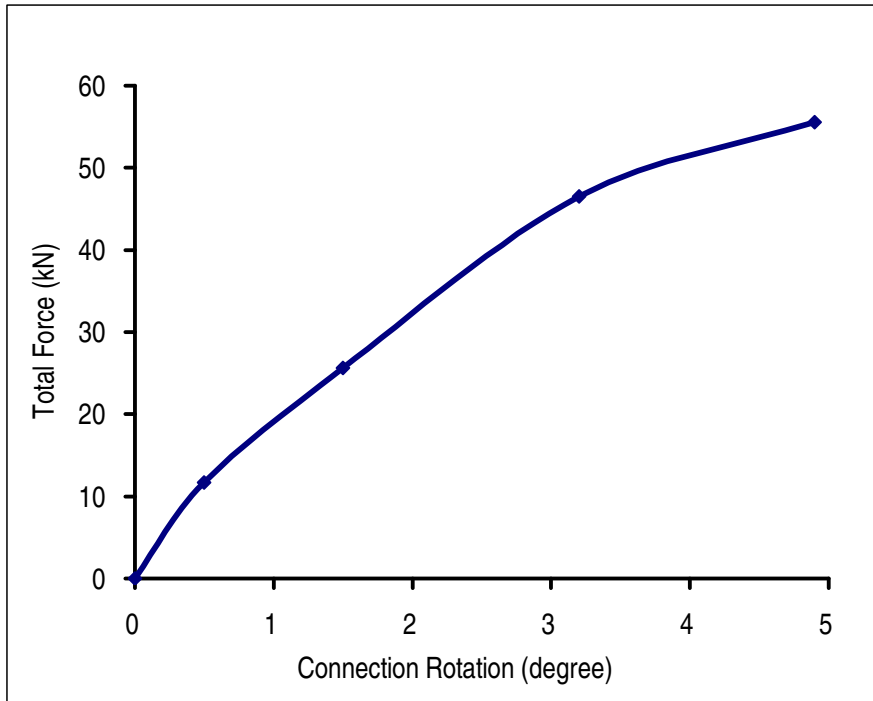
Nominal Temperature

450°C

Time (minute)	Thermocouple Average(°C)	Jack Displacement (mm)	Load Angle α(°)	Beam Rotation (°)	Column Rotation (°)	Connection Rotation (°)	Force Rotation (°)	F3 from F1 (kN)	F3 from F2 (kN)	F3 Average (kN)	Tension (kN)	Shear (kN)	Moment (kN*m)
0	450.000	1.722	55	N/A	N/A	0	0	0	0	0	0	0	0
1	450.000	1.726	55.04	N/A	N/A		0.044	2.99	2.29	5.27	3.02	4.32	2.12
2	450.000	1.723	55.12	N/A	N/A		0.117	3.01	2.30	5.32	3.04	4.36	2.14
3	450.000	1.723	54.88	N/A	N/A		-0.121	3.02	2.33	5.36	3.08	4.38	2.15
4	450.000	1.729	54.96	N/A	N/A		-0.042	3.08	2.36	5.44	3.12	4.45	2.18
5	450.000	2.709	55.05	N/A	N/A		0.054	4.30	2.98	7.28	4.17	5.96	2.92
6	450.000	4.216	55.08	N/A	N/A		0.079	5.42	3.51	8.94	5.12	7.33	3.59
7	450.000	5.809	55.01	N/A	N/A		0.010	5.56	3.62	9.19	5.27	7.53	3.69
8	450.000	7.293	55.05	N/A	N/A		0.052	5.97	3.76	9.74	5.58	7.98	3.91
9	450.000	8.376	55.39	N/A	N/A		0.386	6.18	3.81	9.99	5.68	8.22	4.03
10	450.000	9.791	55.74	N/A	N/A	0.500	0.736	7.52	4.20	11.72	6.60	9.69	4.75
11	450.000	11.188	55.79	N/A	N/A		0.790	9.01	4.80	13.81	7.76	11.42	5.59
12	450.000	12.536	55.87	N/A	N/A		0.872	10.84	5.45	16.29	9.14	13.48	6.61
13	450.000	13.791	55.82	N/A	N/A		0.822	12.56	6.12	18.68	10.49	15.45	7.57
14	450.000	15.119	55.88	N/A	N/A		0.879	14.05	6.67	20.73	11.63	17.16	8.41
15	450.000	16.314	55.88	N/A	N/A		0.875	15.12	7.06	22.18	12.45	18.36	9.00
16	450.000	17.410	55.93	N/A	N/A		0.931	15.44	7.25	22.69	12.71	18.80	9.21
17	450.000	18.407	55.86	N/A	N/A		0.857	15.75	7.39	23.13	12.98	19.15	9.38
18	450.000	19.453	55.79	N/A	N/A		0.787	16.15	7.63	23.78	13.37	19.67	9.64
19	450.000	20.465	55.89	N/A	N/A		0.890	16.53	7.77	24.30	13.63	20.12	9.86
20	450.000	21.598	55.77	N/A	N/A	1.500	0.771	17.45	8.19	25.64	14.42	21.20	10.39
21	450.000	22.868	55.88	N/A	N/A		0.884	19.13	8.92	28.05	15.73	23.22	11.38
22	450.000	24.198	55.88	N/A	N/A		0.877	21.09	9.74	30.82	17.29	25.52	12.50

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23	450.000	25.519	55.83	N/A	N/A		0.830	22.88	10.59	33.47	18.80	27.70	13.57
24	450.000	26.896	55.78	N/A	N/A		0.785	24.66	11.27	35.94	20.21	29.72	14.56
25	450.000	28.289	55.80	N/A	N/A		0.800	26.15	12.00	38.14	21.44	31.55	15.46
26	450.000	29.771	55.80	N/A	N/A		0.797	27.69	12.64	40.33	22.67	33.36	16.35
27	450.000	31.220	55.80	N/A	N/A		0.801	29.04	13.10	42.15	23.69	34.86	17.08
28	450.000	32.638	55.84	N/A	N/A		0.842	30.12	13.55	43.67	24.52	36.14	17.71
29	450.000	34.031	55.78	N/A	N/A		0.785	31.10	14.08	45.18	25.41	37.36	18.31
30	450.000	35.377	55.77	N/A	N/A	3.200	0.769	32.14	14.37	46.51	26.16	38.45	18.84
31	450.000	36.827	55.64	N/A	N/A		0.637	32.88	14.71	47.59	26.86	39.28	19.25
32	450.000	38.212	55.65	N/A	N/A		0.650	33.71	15.00	48.71	27.49	40.22	19.71
33	450.000	39.725	55.61	N/A	N/A		0.607	34.46	15.29	49.75	28.10	41.05	20.11
34	450.000	41.182	55.84	N/A	N/A		0.842	35.25	15.34	50.60	28.41	41.87	20.52
35	450.000	42.599	55.73	N/A	N/A		0.726	35.95	15.68	51.63	29.07	42.66	20.90
36	450.000	44.027	55.78	N/A	N/A		0.776	36.75	15.82	52.57	29.56	43.46	21.30
37	450.000	45.386	55.79	N/A	N/A		0.786	37.33	16.08	53.41	30.03	44.17	21.64
38	450.000	46.779	55.87	N/A	N/A		0.870	38.02	16.07	54.09	30.35	44.77	21.94
39	450.000	48.191	55.85	N/A	N/A		0.849	38.66	16.19	54.85	30.79	45.39	22.24
40	450.000	49.598	55.90	N/A	N/A	4.900	0.900	39.23	16.32	55.56	31.15	46.01	22.54
41	450.000	51.080	55.84	N/A	N/A		0.843	36.51	14.98	51.49	28.91	42.61	20.88
42	450.000	52.570	55.96	N/A	N/A		0.956	33.74	13.56	47.30	26.48	39.19	19.20
43	450.000	54.070	56.05	N/A	N/A		1.054	32.14	12.70	44.85	25.04	37.20	18.23
44	450.000	55.551	56.01	N/A	N/A		1.008	31.84	12.59	44.42	24.83	36.83	18.05
45	450.000	57.057	56.01	N/A	N/A		1.012	30.78	12.09	42.87	23.97	35.55	17.42
46	450.000	58.570	56.02	N/A	N/A		1.017	28.01	10.85	38.86	21.72	32.22	15.79
47	450.000	60.026	56.18	N/A	N/A		1.183	26.89	10.28	37.17	20.69	30.88	15.13
48	450.000	61.515	56.02	N/A	N/A		1.023	26.27	10.04	36.31	20.29	30.11	14.75
49	450.000	62.957	56.06	N/A	N/A		1.058	25.60	9.68	35.29	19.70	29.27	14.34
50	450.000	64.416	56.04	N/A	N/A		1.037	25.20	9.52	34.72	19.40	28.80	14.11
51	450.000	65.786	56.09	N/A	N/A		1.086	25.14	9.38	34.53	19.26	28.65	14.04
52	450.000	67.196	56.15	N/A	N/A		1.155	25.20	9.19	34.39	19.15	28.56	14.00



Photographs after Test

