

Test no.	Specimen	Speed change	CSA dimensions				Length			Final Eng.		Yield		Ultimate		Young's Modulus
			w	d	Area		L0	L1	Strain	Load (kN)	Stress	Strain	Load (kN)	Stress		
1	F1	yes	10.2	9.3	94.9	90.0	112.0	0.2444	36.0	379.5	48.0	506.0				
2	F1	yes	10.0	9.1	91.0	90.0	110.0	0.2222	37.0	406.6	48.0	527.5				
3	F1	yes	9.9	9.2	91.1	90.0	108.0	0.2000	37.0	406.2	48.0	527.0				
4	F1	no	10.0	9.1	91.0	90.0	109.0	0.2111	35.0	384.6	47.0	516.5				
5	10mm	yes	10.0	10.1	101.0	90.0	114.0	0.2667	33.0	326.7	47.0	465.3				
6	10mm	yes	10.0	10.1	101.0	90.0	112.0	0.2444	33.0	326.7	47.0	465.3				
7	12mm	yes	10.0	10.0	100.0	90.0	114.0	0.2667	40.0	400.0	57.0	570.0				
8	12mm	yes	10.0	10.1	101.0	90.0	111.0	0.2333	42.0	415.8	56.0	554.5				
9	15mm	yes	10.1	10.0	101.0	90.0	117.0	0.3000	32.0	316.8	46.0	455.4				
10	15mm	no	10.1	10.0	101.0	90.0	114.0	0.2667	31.5	311.9	46.0	455.4				
11	W1	no	20.0	5.0	100.0	90.0	110.0	0.2222	41.9	419.5	0.002174	507.9	0.147390	192973.3089		
12	8mm	no	20.0	5.0	100.0	90.0	118.0	0.3111	34.8	348.4	0.001759	457.1	0.206370	198106.7817		
13	W2	no	20.0	5.0	100.0	90.0	114.0	0.2667	42.0	420.1	0.002080	528.7	0.171740	201978.1224		
14	F2	no	20.0	5.0	100.0	90.0	116.0	0.2889	44.7	447.0	0.002255	531.4	0.171480	198224.5647		
15	F2	no	20.0	5.0	100.0	90.0	116.0	0.2889	44.8	447.7	0.002263	534.1	0.173650			
16	F2	no	20.0	5.0	100.0	90.0	115.0	0.2778	45.2	451.7	0.002283					
17	F2	no	20.0	5.0	100.0	90.0	115.0	0.2778	43.5	434.9	0.006380	531.7	0.168720			
18	8mm	no	20.0	5.0	100.0	90.0	122	0.3556	35.4	353.8	0.004840	453.7	0.220960			

Test no.	Bolt type	Bolt no.	Disp. Rate mm/min	Scans per second	Ultimate load (kN)	Ultimate strain	Measured elongation	Energy absorbed (kJ)	Failure Strain	Comments
1	SS	1	2	10	76.04	0.472466	15.7	1.0747	0.5233	
2	SS	2	2	10	74.26	0.429900	15.7	1.1446	0.5233	
3	SS	3	2	10	74.15	0.415233	15.9	1.1451	0.5300	
4	SS	4	2	10	74.58	0.432400	15.9	1.1479	0.5300	
5	SS	5	2	10	74.18	0.376467	15.9	1.1462	0.5300	
6	BB	1	2	10	79.08	0.188833	0.1	0.4021	0.0033	
7	BB	2	2	10	79.89	0.223200	0.1	0.5223	0.0033	
8	BB	3	2	10	79.29	0.215367	0.1	0.5767	0.0033	
9	BB	4	2	10	78.67	0.203167	0.1	0.3973	0.0033	
10	BB	5	2	10	80.01	0.225900	0.1	0.4399	0.0033	
11	SS	6	2	10	75.49	0.451867	15.9	1.1175	0.5300	
12	SS	7	2	10	75.76	0.387100	15.9	1.1300	0.5300	
13	SS	8	2	10	77.45	0.511800	15.9	1.1439	0.5300	
14	SS	9	20	10	73.83	0.330233	13.3	0.9307	0.4433	
15	SS	10	200	10	74.94	0.319600	11.3	0.8498	0.3767	
16	BB	6	2	10	80.88	0.200500	0.1	0.5592	0.0033	
17	BB	7	2	10	76.58	0.168467	0.1	0.3778	0.0033	
18	BB	8	2	10	77.63	0.190600	0.1	0.5279	0.0033	
19	BB	9	20	10	79.21	0.179567	0.1	0.3399	0.0033	
20	BB	10	200	10	79.27	0.178400	0.1	0.5387	0.0033	
21 Re 20	BB	11	200	10	81.83	0.197433	0.1	0.5432	0.0033	
22			2000	10						Not Useful
23			2000	5000						Not Useful
24	SS	12	2000	200	77.82	0.276933	11.2	0.8167	0.3733	
25	BB	13	2000	200	84.52	0.138400	0.2	0.4782	0.0067	