Appendix 2

This Appendix includes several datasets on slender reinforced concrete beams subjected to different loading and support conditions. The experimental results included in the ACI-DAfStb databases on simply supported beams without and with shear reinforcement subjected to concentrated load [1, 2] are not listed in this Appendix, although they have been used to validate the theoretical approaches presented in this thesis. The reader should refer to reference [1, 2].

The databases comprise a total of 1179 tests of used for comparison. The datasets include also some tests that have been excluded from the analyses due to one of the following reasons: (i) non-slender members, (ii) unknown aggregate size, (iii) nonrectangular members, (iv) flexural failure, (v) shear compression failure with a direct strut developing above the critical shear crack allowing the plastic strength of the member to be partially reached, (vi) variable static scheme during testing.

Notation and definition of the main geometrical and mechanical properties are available in Chapter 6, 7 and 8 of this thesis.

The author acknowledges that the datasets might still contain errors.

Table A2.1 Simply supported beams without shear reinforcement subjected to point load

Referemce	Specimen	f_c [MPa]	d_g [mm]	f_y [MPa]	d [mm]	h [mm]	b/d [-]	n_{bar} [-]	d_{bar} [mnn]	ρ [-]	$plate/d$ [-]	a/d [-]	V_{right} [kN]
Reineck et al. [1]	# 629 tests[a]	12.9 – 110.9	5 - 51	283 -1779	65 - 2000	80 - 2200	0.14-6.85	1 - 36	6 - 40	0.0014 – 0.0664	0-3.08	2.5 – 8.6	
Cavagnis et al. [3]	SC70	33.3	16	713	556	600	0.450	2	28.0	0.0089	0.36	6.92	114
	SC69	32.9	16	713	556	600	0.450	2	28.0	0.0089	0.36	5.67	107
	SC61	35.3	16	713	556	600	0.450	2	28.0	0.0089	0.36	4.41	103
	SC64	35.6	16	713	556	600	0.450	2	28.0	0.0089	0.36	3.15	108
	SC68	32.6	16	713	556	600	0.450	2	28.0	0.0089	0.36	2.52	124
	SC65	35.5	16	760	556	600	0.447	2	22.0	0.0054	0.36	3.13	102

[a]Only the specimens respecting the following criteria were considered: (i) rectangular cross-section; (ii) $a/d \geq 2.5$; (iii) aggregate size specified. Two tests in the original database have been corrected: Cladera H50/5 V_{exp}=129.5 kN [4], Podgomiak BRH100 V_{exp}=357 kN [5]

Table A2.2 Simply supported beams without shear reinforcement subjected to point load and axial forces

Reference	Specimen	f_c [MPa]	d_g [mm]	f_y [MPa]	b [mm]	d [mm]	h [mm]	ρ [-]	$plate$ [mm]	a [mm]	a/d [-]	N [kN]	V_{right} [kN]	Remarks[a]
Diaz de Cossio et al. [6]	B1	26.0	25	458	152	252	304	0.0101	304	660	2.6	-89.0	66.0	a_{eff}/d<2.5
	B2	28.5	25	458	152	252	304	0.0101	304	914	3.6	-89.0	52.0	
	B3	26.3	25	393	152	252	304	0.0101	304	1168	4.6	-89.0	45.8	
	B4	28.2	25	458	152	252	304	0.0101	304	1422	5.6	-89.0	42.0	
	B11	25.2	25	331	152	252	304	0.0337	304	660	2.6	-89.0	84.0	a_{eff}/d<2.5
	B12	27.0	25	391	152	252	304	0.0337	304	914	3.6	-89.0	65.5	
	B13	27.9	25	354	152	252	304	0.0337	304	1168	4.6	-89.0	58.5	
	B14	29.3	25	362	152	252	304	0.0337	304	1422	5.6	-89.0	52.5	
	B15	28.3	25	326	152	252	304	0.0337	304	1676	6.7	-89.0	46.9	
Jørgensen et al. [7]	ST-1	24.8	16	1027	200	165	200	0.0107	50	500	3.0	426.9	39.5	
	ST-2	26.1	16	1027	200	165	200	0.0107	50	500	3.0	96.8	43.5	
	ST-3	26.1	16	1027	200	165	200	0.0107	50	500	3.0	200.0	45.4	
	ST-6	26.8	16	1027	200	165	200	0.0107	50	500	3.0	300.0	43.0	
	ST-7	27.4	16	1027	200	165	200	0.0107	50	500	3.0	400.0	40.8	
	ST-8	27.4	16	1027	200	165	200	0.0107	50	500	3.0	500.0	39.8	
	ST-9	27.4	16	1027	200	165	200	0.0107	50	500	3.0	300.0	45.4	
	ST-10	28.1	16	1027	200	165	200	0.0107	50	500	3.0	400.0	36.9	
	ST-12	28.1	16	1027	200	165	200	0.0107	50	500	3.0	200.0	44.0	
	ST-13	28.8	16	1027	200	165	200	0.0107	50	600	3.6	100.0	33.9	
	ST-14	28.8	16	1027	200	165	200	0.0107	50	600	3.6	200.0	40.7	
	ST-15	28.8	16	1027	200	165	200	0.0107	50	600	3.6	300.0	44.6	
	ST-17	29.5	16	1027	200	165	200	0.0107	50	600	3.6	100.0	39.9	
	ST-18	29.5	16	1027	200	165	200	0.0107	50	600	3.6	200.0	32.8	
	ST-19	29.5	16	1027	200	165	200	0.0107	50	600	3.6	300.0	32.0	
	ST-20	29.5	16	1027	200	165	200	0.0107	50	600	3.6	500.0	30.2	
	ST-22	30.2	16	1027	200	165	200	0.0107	50	500	3.0	500.0	37.5	
	ST-23	30.2	16	1027	200	165	200	0.0107	50	500	3.0	600.0	34.5	
	ST-24	30.2	16	1027	200	165	200	0.0107	50	575	3.5	600.0	35.2	

Table A2.2 Simply supported beams without shear reinforcement subjected to point load and axial forces

Reference	Specimen	f_c [MPa]	d_g [mm]	f_y [MPa]	b [mm]	d [mm]	h [mm]	ρ [-]	*plate* [mm]	a [mm]	a/d [-]	N [kN]	V_{right} [kN]	Remarks[a]
Khulmann et al. [8]	B2-2	45.9	16	558	400	260	300	0.0185	70	1250	4.8	200.0	122.5	
	B3-1	46.0	16	558	400	260	300	0.0185	70	750	2.9	400.0	164.4	
	B3-2	46.0	16	558	400	260	300	0.0185	70	1250	4.8	400.0	132.7	
	B4-1	46.2	16	558	400	260	300	0.0185	70	750	2.9	600.0	109.8	
	B4-2	46.2	16	558	400	260	300	0.0185	70	1250	4.8	600.0	125.2	
	B5-1	47.5	16	558	400	260	300	0.0185	70	750	2.9	800.0	139.4	
	B5-2	47.5	16	558	400	260	300	0.0185	70	1250	4.8	800.0	113.3	
	B6-1	45.8	16	572	400	260	300	0.0097	70	750	2.9	200.0	137.3	
	B7-1	43.8	16	546	400	260	300	0.0151	70	750	2.9	200.0	144.6	
	B7-2	43.8	16	546	400	260	300	0.0151	70	1250	4.8	200.0	109.0	
	B8-1	45.3	16	570	400	260	300	0.0236	70	750	2.9	200.0	150.2	
	B9-1	45.1	16	567	400	260	300	0.0260	70	750	2.9	200.0	150.8	
	B9-2	45.1	16	567	400	260	300	0.0260	70	1250	4.8	200.0	143.6	
	B10-1	47.5	16	572	400	260	300	0.0097	70	750	2.9	600.0	94.1	
	B11-1	47.2	16	546	400	260	300	0.0151	70	750	2.9	600.0	160.1	
	B11-2	47.2	16	546	400	260	300	0.0151	70	1250	4.8	600.0	126.3	
	B12-1	46.8	16	570	400	260	300	0.0236	70	750	2.9	600.0	174.0	
	B12-2	46.8	16	570	400	260	300	0.0236	70	1250	4.8	600.0	140.7	
	C4-1	43.6	16	559	400	260	300	0.0151	70	1000	3.8	150.0	153.2	
	C4-2	43.6	16	559	400	260	300	0.0151	70	1000	3.8	150.0	144.2	
	C5-2	43.7	16	559	400	260	300	0.0151	70	1000	3.8	340.0	136.1	
	C7-1	44.4	16	559	400	260	300	0.0151	70	1000	3.8	150.0	129.8	
	C7-2	44.4	16	559	400	260	300	0.0151	70	1000	3.8	150.0	125.1	
	C8-1	44.5	16	559	400	260	300	0.0151	70	1000	3.8	340.0	127.6	
	C8-2	44.5	16	559	400	260	300	0.0151	70	1000	3.8	340.0	116.7	
	C9-1	27.1	16	559	400	260	300	0.0185	70	750	2.9	500.0	105.2	
	C10-1	51.5	16	559	400	260	300	0.0185	70	750	2.9	500.0	146.0	
	C11-1	45.0	16	559	400	260	300	0.0236	70	750	2.9	340.0	146.5	
	C12-1	45.1	16	559	400	260	300	0.0236	70	750	2.9	600.0	151.2	
	C12-2	45.1	16	559	400	260	300	0.0236	70	1250	4.8	600.0	144.0	
	C13-1	45.5	16	559	400	260	300	0.0185	70	750	2.9	600.0	111.2	
	C13-2	45.5	16	559	400	260	300	0.0185	70	1250	4.8	600.0	134.5	
Madsen et al. [9]	A1	19.1	16	625	150	175	200	0.0374	50	625	3.6	-219.8	49.0	$a_{eff}/d<2.5$
	B2	23.6	16	625	150	175	200	0.0374	50	625	3.6	-92.8	51.7	
	C1	24.2	16	625	150	175	200	0.0374	50	625	3.6	-186.9	50.3	$a_{eff}/d<2.5$
	D1	18.0	16	625	150	175	200	0.0374	50	625	3.6	-407.0	53.9	$a_{eff}/d<2.5$
	D2	18.0	16	625	150	175	200	0.0374	50	625	3.6	-464.3	51.9	$a_{eff}/d<2.5$
	E1	20.2	16	625	150	175	200	0.0374	50	625	3.6	-231.0	46.2	$a_{eff}/d<2.5$
	F1	20.2	16	625	150	175	200	0.0374	50	625	3.6	-346.2	50.6	$a_{eff}/d<2.5$
	F2	20.2	16	625	150	175	200	0.0374	50	625	3.6	-346.6	52.3	$a_{eff}/d<2.5$
	G2	22.1	16	625	150	175	200	0.0374	50	625	3.6	-84.7	52.4	
	H2	21.5	16	625	150	175	200	0.0374	50	625	3.6	-164.8	50.9	$a_{eff}/d<2.5$
	I1	21.4	16	625	150	175	200	0.0374	50	625	3.6	-40.9	39.6	
	I2	21.5	16	625	150	175	200	0.0374	50	625	3.6	-40.9	38.3	

Table A2.2 Simply supported beams without shear reinforcement subjected to point load and axial forces

Reference	Specimen	f_c [MPa]	d_g [mm]	f_y [MPa]	b [mm]	d [mm]	h [mm]	ρ [-]	*plate* [mm]	a [mm]	a/d [-]	N [kN]	V_{right} [kN]	Remarks[a]
	J1	19.5	16	625	150	175	200	0.0374	50	625	3.6	-70.2	35.3	
	J2	19.5	16	625	150	175	200	0.0374	50	625	3.6	-149.0	50.2	
	K1	19.5	16	625	150	175	200	0.0374	50	625	3.6	-182.4	45.7	$a_{eff}/d<2.5$
	K2	19.5	16	625	150	175	200	0.0374	50	625	3.6	-240.3	48.6	$a_{eff}/d<2.5$
	L1	23.2	16	625	150	175	200	0.0374	50	625	3.6	-223.6	46.9	$a_{eff}/d<2.5$
	L2	23.2	16	625	150	175	200	0.0374	50	625	3.6	-224.1	50.4	$a_{eff}/d<2.5$
	4	47.1	19	408	152	254	305	0.0102	132	762	3.0	29.4	45.4	
	5	16.4	19	408	152	254	305	0.0205	132	762	3.0	29.4	34.0	
	11	15.5	19	408	152	254	305	0.0307	132	762	3.0	62.1	43.1	
	16	30.9	19	408	152	254	305	0.0102	132	1372	5.4	49.0	28.6	
	19	18.8	19	408	152	254	305	0.0205	132	1372	5.4	29.4	40.8	
	20	49.2	19	408	152	254	305	0.0205	132	1372	5.4	29.4	59.0	
	21	51.5	19	408	152	254	305	0.0205	132	1372	5.4	62.1	58.1	
	23	18.8	19	408	152	254	305	0.0307	132	1372	5.4	29.4	43.1	
	25	28.1	19	408	152	254	305	0.0307	132	1372	5.4	49.0	52.2	
	26	29.4	19	408	152	254	305	0.0307	132	1372	5.4	81.6	43.1	
	29	54.3	19	408	152	254	305	0.0307	132	1372	5.4	29.4	68.0	
Mattock et al. [10]	2	15.8	19	408	152	254	305	0.0102	132	762	3.0	-62.1	41.7	$a_{eff}/d<2.5$
	6	18.7	19	408	152	254	305	0.0205	132	762	3.0	-62.1	54.9	
	7	17.8	19	408	152	254	305	0.0205	132	762	3.0	-130.6	61.2	$a_{eff}/d<2.5$
	8	44.6	19	408	152	254	305	0.0205	132	762	3.0	-62.1	94.3	
	9	48.9	19	408	152	254	305	0.0205	132	762	3.0	-130.6	107.5	$a_{eff}/d<2.5$
	12	16.5	19	408	152	254	305	0.0307	132	762	3.0	-62.1	63.1	
	13	50.8	19	408	152	254	305	0.0307	132	762	3.0	-62.1	90.7	
	17	28.3	19	408	152	254	305	0.0102	132	1372	5.4	-130.6	38.6	
	27	31.1	19	408	152	254	305	0.0307	132	1372	5.4	-65.3	54.4	
	28	24.7	19	408	152	254	305	0.0307	132	1372	5.4	-130.6	53.5	
	30	56.2	19	408	152	254	305	0.0307	132	1372	5.4	-62.1	68.0	
	31	53.7	19	408	152	254	305	0.0307	132	1372	5.4	-130.6	68.0	
	F38B2	12.7	25	381	305	362	406	0.0192	177	995	2.8	-115.5	115.5	$a_{eff}/d<2.5$
	F38E2	14.4	25	396	305	368	406	0.0051	177	991	2.7	-93.7	93.7	$a_{eff}/d<2.5$
	F38B4	32.0	25	393	305	375	406	0.0186	177	989	2.6	-176.4	176.4	$a_{eff}/d<2.5$
	F38D4	27.4	25	375	308	381	406	0.0133	177	991	2.6	-172.6	172.6	$a_{eff}/d<2.5$
	F38E4	32.8	25	375	305	378	406	0.0092	177	988	2.6	-150.7	150.7	$a_{eff}/d<2.5$
	F38A6	46.5	25	371	305	356	406	0.0294	177	989	2.8	-240.6	240.6	$a_{eff}/d<2.5$
	F38B6	42.4	25	386	305	381	406	0.0183	177	988	2.6	-202.1	202.1	$a_{eff}/d<2.5$
Morrow et al. [11]	F55B2	12.1	25	382	305	368	406	0.0189	177	1425	3.9	-96.2	96.2	
	F55A4	26.9	25	413	308	372	406	0.0201	177	1422	3.8	-154.0	154.0	
	F55B4	30.1	25	392	305	381	406	0.0183	177	1419	3.7	-128.3	128.3	
	F55D4	26.1	25	441	308	381	406	0.0148	177	1420	3.7	-128.3	128.3	
	F55E4	28.9	25	434	308	387	406	0.0096	177	1420	3.7	-132.8	132.8	
	F55A6	42.9	25	387	305	349	406	0.0336	177	1420	4.1	-192.4	192.4	
	F55B6	44.6	25	383	305	368	406	0.0189	177	1418	3.8	-144.3	144.3	
	F70B2	14.7	25	390	305	362	406	0.0192	177	1788	4.9	-93.0	93.0	

Table A2.2 Simply supported beams without shear reinforcement subjected to point load and axial forces

Reference	Specimen	f_c [MPa]	d_g [mm]	f_y [MPa]	b [mm]	d [mm]	h [mm]	ρ [-]	*plate* [mm]	a [mm]	a/d [-]	N [kN]	V_{right} [kN]	Remarks[a]
	F70A4	29.6	25	383	305	362	406	0.0220	177	1786	4.9	-144.3	144.3	
	F70A6	39.4	25	361	305	368	406	0.0343	177	1785	4.8	-176.4	176.4	
	F84B4	30.2	25	389	305	375	406	0.0186	177	2141	5.7	-133.1	133.1	

[a] Specimens with a_{eff}/d <2.5 are not considered for comparison with the models presented in the thesis

Table A2.3 Simply supported beams without shear reinforcement and with prestressed tendons subjected to point load

Reference	Specimen	f_c [MPa]	d_g [mm]	f_y [MPa]	b [mm]	d [mm]	h [mm]	ρ [-]	e_p [mm]	a [mm]	a/d [-]	P [kN]	V_{right} [kN]
Kar [12]	A1	35.9	19	1386	127	178	254	0.0045	51	889	5.0	80.1	27.1
	A6	28.0	19	1476	127	178	254	0.0069	51	711	4.1	48.9	38.9
	B4	32.0	19	1476	102	152	203	0.0100	51	610	4.1	48.3	29.3
	B5	28.0	19	1476	102	152	203	0.0100	51	686	4.6	41.2	25.8
	B6	30.2	19	1476	102	152	203	0.0125	51	711	4.7	59.6	27.3
	B9	33.3	19	1476	102	152	203	0.0100	51	762	5.1	65.5	26.3
	B10	35.4	19	1476	102	152	203	0.0100	51	762	5.1	82.7	33.7
Sozen et al. [13]	A1143	42.9	38	1434	152	209	305	0.0089	57	1321	6.3	227.0	54.8
	A1151	20.0	38	1503	152	214	305	0.0049	62	1321	6.2	126.3	31.6
	A1153	30.1	38	1503	152	204	305	0.0078	51	1321	6.5	206.6	42.2
	A2129	23.1	38	1503	152	215	305	0.0031	62	1321	6.2	42.4	18.6
	A2139	21.6	38	1503	152	227	305	0.0041	75	1321	5.8	57.1	24.9
	A2151	38.8	38	1503	152	206	305	0.0096	54	1321	6.4	122.8	38.9
	A2220	36.9	38	1434	152	215	305	0.0035	62	914	4.3	47.9	33.2
	A2224	23.9	38	1434	152	224	305	0.0028	71	914	4.1	38.5	32.2
	A2227	26.6	38	1434	152	213	305	0.0035	60	914	4.3	47.0	31.8
	A2228	24.0	38	1434	155	222	305	0.0033	70	914	4.1	38.6	29.7
	A2231	24.3	38	1434	152	205	305	0.0036	52	914	4.5	70.0	34.2
	A2234	28.6	38	1434	152	212	305	0.0047	59	914	4.3	61.4	31.6
	A2236	19.9	38	1434	152	212	305	0.0035	60	914	4.3	68.9	33.7
	A2239	17.8	38	1434	152	224	305	0.0033	71	914	4.1	28.3	24.8
	A2240	39.9	38	1434	152	208	305	0.0077	56	914	4.4	122.0	59.7
	A2249	32.8	38	1434	152	208	305	0.0077	56	914	4.4	96.3	52.0
	A3222	29.6	38	1434	152	238	305	0.0031	86	914	3.8	18.8	32.2
	A3227	19.3	38	1434	152	233	305	0.0032	80	914	3.9	7.8	28.8
	A3237	42.2	38	1434	152	208	305	0.0077	56	914	4.4	8.5	40.0
	A3249	32.8	38	1434	152	208	305	0.0077	56	914	4.4	57.6	47.5

[a] Only specimens with $a_{eff}/d \geq 2.5$ are included in the database and considered for comparison with the models presented in the thesis (data from Reineck and Dunkelberg)

Table A2.4 Simply supported beams without shear reinforcement subjected to distributed load[a]

Referemce	Specimen	f_c [MPa]	d_g [mm]	f_y [MPa]	b [mm]	d [mm]	h [mm]	ρ [-]	*plate* [mm]	l [mm]	l/d [-]	q [kN/m]	V_{right} [kN]	Remarks[b]
Acevedo et al. [14]	SB2	32.4	10	636	332	205	256	0.0172	38	2667	13.0	95.0	126.7	
Aoyagi et al.	BL	36.0	25	370	150	250	300	0.0405	120	3000	12.0	86.3	129.5	(F/SC)
Cavagnis et al. [15]	SC51a	33.6	16	713	250	556	600	0.0089	200	5600	10.1	60.4	169.1	
	SC51b	33.6	16	713	250	556	600	0.0089	200	5600	10.1	57.8	161.8	
Dassow [16]	LD2	28.1	25	478	914	541	610	0.0102	305	5486	10.1	197.6	542.0	
	LD3	24.3	25	478	914	541	610	0.0102	305	5486	10.1	198.3	544.0	
	LD4	25.6	25	470	914	541	610	0.0102	305	5486	10.1	231.6	635.4	
Diaz de Cossio et al. [6]	D13	19.0	25	464	152	252	305	0.0099	152	2794	11.1	36.3	50.7	
	D17	41.0	25	586	152	252	305	0.0099	152	2794	11.1	39.3	54.9	
	D4	35.1	25	305	152	252	305	0.0222	152	2235.2	8.9	104.7	117.0	l/d<10
	D14	32.7	25	462	152	252	305	0.0101	152	2235.2	8.9	80.8	90.3	l/d<10
	D15	27.1	25	461	152	252	305	0.0101	152	2235.2	8.9	77.2	86.3	l/d<10
	D16	40.3	25	586	152	252	305	0.0101	152	2235.2	8.9	95.2	106.4	l/d<10
Feldman et al. [17]	D1	30.8	25	295	152	252	305	0.0336	152	2794	11.1	66.4	92.7	
	D2	38.6	25	307	152	252	305	0.0336	152	2794	11.1	79.0	110.3	
	D3	33.2	25	314	152	252	305	0.0336	152	2794	11.1	67.3	94.1	
	D6	23.8	25	310	152	252	305	0.0336	152	2794	11.1	74.5	104.1	
Klein [18]	LD5	33.1	25	495	533	541	610	0.0105	305	6502	12.0	81.3	264.2	
	LD8	29.4	25	447	533	1151	1219	0.0098	305	13818	12.0	60.6	419.0	
Krefeld et al. [19]	2CU	20.8	25	394	152	254	305	0.0131	178	3048	12.0	35.6	54.3	
	3CU	20.5	25	379	152	256	305	0.0199	178	3048	11.9	47.0	71.6	
	4CU	20.6	25	394	152	254	305	0.0262	178	3048	12.0	52.2	79.6	
	5CU	20.4	25	370	152	252	305	0.0335	178	3048	12.1	54.3	82.7	
	6CU	20.6	25	400	152	250	305	0.0428	178	3048	12.2	51.1	77.8	
	3EU	17.6	25	379	152	256	305	0.0199	178	3658	14.3	33.8	61.8	
	4EU	20.2	25	394	152	254	305	0.0262	178	3658	14.4	39.9	72.9	
	5EU	19.3	25	370	152	252	305	0.0336	178	3658	14.5	42.3	77.4	
	6EU	20.1	25	400	152	250	305	0.0430	178	3658	14.6	37.5	68.6	
	3GU	22.6	25	379	152	256	305	0.0199	178	4267	16.7	27.7	59.2	
	4GU	22.1	25	394	152	254	305	0.0262	178	4267	16.8	33.1	70.6	
	5GU	21.3	25	370	152	252	305	0.0335	178	4267	16.9	30.9	65.8	
	6GU	21.2	25	379	152	250	305	0.0430	178	4267	17.1	35.2	75.1	
	3JU	22.2	25	400	152	256	305	0.0199	178	4877	19.1	19.9	48.5	F
	4JU	22.2	25	394	152	254	305	0.0262	178	4877	19.2	23.4	57.1	
	5JU	21.5	25	370	152	252	305	0.0337	178	4877	19.4	27.2	66.3	
	6JU	21.0	25	400	152	250	305	0.0430	178	4877	19.5	23.5	57.3	
	4CUa	32.3	25	394	152	254	305	0.0262	178	3048	12.0	63.9	97.4	
	5CUa	32.3	25	370	152	252	305	0.0335	178	3048	12.1	62.5	95.2	
	6CUa	36.8	25	400	152	251	305	0.0428	178	3048	12.2	70.6	107.6	
	3CUb	12.2	25	379	152	255	305	0.0199	178	3048	12.0	38.8	59.1	
	4CUb	17.1	25	394	152	254	305	0.0262	178	3048	12.0	46.4	70.7	
	5CUb	14.7	25	370	152	253	305	0.0336	178	3048	12.0	52.8	80.5	
	6CUb	13.7	25	400	152	250	305	0.0430	178	3048	12.2	47.0	71.6	

Table A2.4 Simply supported beams without shear reinforcement subjected to distributed load[a]

Referemce	Specimen	f_c [MPa]	d_g [mm]	f_y [MPa]	b [mm]	d [mm]	h [mm]	ρ [-]	*plate* [mm]	l [mm]	l/d [-]	q [kN/m]	V_{right} [kN]	Remarks[b]
	4EUa	14.3	25	394	152	254	305	0.0262	178	3658	14.4	27.5	50.3	
	5EUa	15.1	25	370	152	253	305	0.0336	178	3658	14.5	35.0	64.0	
	6EUa	12.8	25	400	152	251	305	0.0430	178	3658	14.6	33.8	61.8	
	3GUa	13.5	25	379	152	256	305	0.0199	178	4267	16.7	22.3	47.6	
	4GUa	11.6	25	394	152	254	305	0.0262	178	4267	16.8	20.7	44.1	
	5GUa	11.2	25	370	152	252	305	0.0338	178	4267	16.9	22.7	48.5	
	11A1	27	25	400	152	314	381	0.0343	178	1828.8	5.8	292.4	267.4	l/d<10
	12A1	30.6	25	400	152	238	305	0.0453	178	1828.8	7.7	197.5	180.6	l/d<10
	13A1	20.2	25	400	152	319	381	0.0080	178	1828.8	5.7	129.5	118.4	l/d<10 F
	14A1	22.8	25	400	152	243	305	0.0105	178	1828.8	7.5	97.8	89.4	l/d<10
	15A1	19.2	25	400	152	316	381	0.0134	178	1828.8	5.8	169.3	154.8	l/d<10
	16A1	21	25	400	152	240	305	0.0177	178	1828.8	7.6	115.3	105.4	l/d<10
	3AAU	34.6	25	400	152	255	305	0.0200	178	1828.8	7.2	167.4	153.1	l/d<10
	4AAU	36.4	25	400	152	254	305	0.0264	178	1828.8	7.2	200.5	183.3	l/d<10
	5AAU	29	25	400	152	252	305	0.0337	178	1828.8	7.3	219.4	200.6	l/d<10
	6AAU	34.4	25	400	152	251	305	0.0429	178	1828.8	7.3	235.0	214.9	l/d<10
	4AU	31.7	25	400	152	254	305	0.0264	178	2438.4	9.6	96.3	117.4	l/d<10
	5AU	31.7	25	400	152	252	305	0.0337	178	2438.4	9.7	108.8	132.6	l/d<10
	6AU	34.1	25	400	152	251	305	0.0429	178	2438.4	9.7	127.0	154.8	l/d<10
Leonhardt et al. [20]	14-1	31.8	16	465	190	273	320	0.0205	100	3000	11.0	71.3	107.0	
	14-2	31.8	16	465	190	273	320	0.0205	100	3000	11.0	71.6	107.4	
	15-1	33.6	16	465	190	272	320	0.0205	100	4000	14.7	47.7	95.4	
	15-2	33.6	16	465	189	273	320	0.0206	100	4000	14.7	50.8	101.6	
	16-1	33.1	16	465	190	273	320	0.0205	100	5000	18.3	38.5	96.3	
	16-2	33.1	16	465	189	274	320	0.0205	100	5000	18.2	38.3	95.8	
	17-1	31.1	16	465	189	273	320	0.0206	100	6000	22.0	29.0	87.0	
	17-2	31.1	16	465	189	274	320	0.0205	100	6000	21.9	29.0	87.0	F
	12-1	32.2	30	465	190	273	323	0.0204	100	2000	7.3	202.5	202.5	l/d<10
	12-2	32.2	30	465	189	272	322	0.0206	100	2000	7.3	160.5	160.5	l/d<10
	13-1	32.7	30	465	190	273	323	0.0204	100	2500	9.2	111.2	139.0	l/d<10
	13-2	32.7	30	465	189	272	322	0.0205	100	2500	9.2	111.2	139.0	l/d<10
Rusch et al. [21]	B01	22.4	15	400	100	200	240	0.0385	100	1440	7.2	117.8	84.8	l/d<10
	B02	22.4	15	400	100	200	240	0.0385	100	1440	7.2	108.3	78.0	l/d<10
	B03	22.4	15	400	100	200	240	0.0385	100	1440	7.2	117.8	84.8	l/d<10
	B04	22.2	15	400	100	200	240	0.0385	100	1440	7.2	107.8	77.6	l/d<10
	B05	22.2	15	400	100	200	240	0.0385	100	1440	7.2	101.1	72.8	l/d<10
	B06	22.2	15	400	100	200	240	0.0385	100	1440	7.2	103.9	74.8	l/d<10
Shioya et al. [22]	1	20.6	10	440	158	100	120	0.0036	20	1200	12.0	29.4	17.6	F [23]
	2	19.7	10	440	158	200	220	0.0036	40	2400	12.0	29.5	35.5	F [23]
	3	21.1	10	440	300	600	655	0.0038	120	7200	12.0	30.9	111.2	
	4	27.2	10	370	500	1000	1200	0.0044	200	12000	12.0	39.5	237.0	
	5	21.9	25	370	500	1000	1200	0.0044	200	12000	12.0	44.0	264.0	
	6	28.5	25	370	1000	2000	2100	0.0040	400	24000	12.0	77.0	924.0	
	7	24.3	25	360	1500	3000	3140	0.0039	600	36000	12.0	105.0	1890.0	

Table A2.4 Simply supported beams without shear reinforcement subjected to distributed load[a]

Referemce	Specimen	f_c [MPa]	d_g [mm]	f_y [MPa]	b [mm]	d [mm]	h [mm]	ρ [-]	*plate* [mm]	l [mm]	l/d [-]	q [kN/m]	V_{right} [kN]	Remarks[b]
	1	20.6	10	440	158	100	120	0.0036	20	1200	12.0	25.6	15.4	ADT [23]
	2	28.5	1	440	158	200	220	0.0036	40	2400	12.0	28.3	33.9	ADT [23]
	3	21.6	25	440	158	200	220	0.0036	40	2400	12.0	29.4	35.3	F [23]
	4	27.3	3	440	300	600	655	0.0038	120	7200	12.0	25.5	91.8	
	5	21.2	25	440	300	600	655	0.0038	120	7200	12.0	38.7	139.3	
	6	28.2	5	370	500	1000	1200	0.0044	200	12000	12.0	33.0	198.0	
Smith [24]	8/0	28.0	19	500	150	200	230	0.0201	100	2440	12.2	48.4	59.0	
	10/0	34.5	19	500	150	200	230	0.0201	100	3052	15.3	33.1	50.5	
	12/0	36.2	19	500	150	200	230	0.0201	100	3660	18.3	28.4	52.0	
Tung et al. [25][c]	SV-2.R	33.8	18	670	170	407	450	0.0074	200	5000	12.3		70.6	
	SV-2.L	33.8	18	670	170	407	450	0.0074	200	5000	12.3		75.7	
Uzel et al. [26]	AP1	35.8	6	505	113	230	250	0.0116	150	1000	4.3	284.0	142.0	l/d<10
	AP2	35.8	6	505	113	230	250	0.0116	150	1500	6.5	86.0	64.5	l/d<10

[a] Only specimens with $l/d \geq 10$ are included in the database; [b] F/SC: flexural failure or shear compression failure. ADT: abnormal diagonal tension. Specimens labelled with F or ADT are not considered for comparison with the models presented in the thesis; [c] the distributed load q was applied at a distance of 400 mm from the edge of the support plates and not on the entire length of the specimen

Table A2.5 Cantilever and continuous beams without shear reinforcement subjected to distributed load

Reference	Specimen	f_c [MPa]	d_g [mm]	f_y [MPa]	b [mm]	d [mm]	h [mm]	ρ [-]	*plate* [mm]	l [mm]	l_C [mm]	l_C/d [mm]	l_{SS} [mm]	V_{right}/ql [kN]	q [kN/m]	V_{right} [kN]	V_{left} [kN]	Remarks[a]
Acevedo et al. [14]	S1	31.8	10	636	333	216	258	0.0109	75	2286	1429	6.6	1715	0.62	92.0	131.4	78.9	
	S3b	55.2	10	634	331	216	252	0.0097	75	1524	953	4.4	1143	0.63	306.0	291.5	174.9	F/SC
	S5	30.9	10	561	332	211	256	0.0044	75	1050	657	3.1	787	0.63	422.0	277.0	166.1	Failure M+
Aoyagi et al. [27]	DM1d	36.0	25	370	150	250	300	0.0405	120	2000	1125	4.5	1750	0.56	114.0	128.3	99.8	Failure M+
	DM2d	36.0	25	370	150	250	300	0.0405	120	2000	1250	5.0	1500	0.63	120.0	150.0	90.0	
	DM3d	36.0	25	370	150	250	300	0.0405	120	2125	1375	5.5	1500	0.65	123.2	169.4	92.4	
	DM4d	36.0	25	370	150	250	300	0.0405	120	2125	1500	6.0	1250	0.71	82.0	123.0	51.3	
	CM0.5d	36.0	25	370	150	250	300	0.0405	120	1875	1000	4.0	1750	0.53	152.0	152.0	133.0	Failure M+
	CM1d	36.0	25	370	150	250	300	0.0405	120	1750	1000	4.0	1500	0.57	168.0	168.0	126.0	Failure M+
	CM1.5d	36.0	25	370	150	250	300	0.0405	120	1625	1000	4.0	1250	0.62	178.0	178.0	111.3	
	CM2d	36.0	25	370	150	250	300	0.0405	120	1500	1000	4.0	1000	0.67	192.0	192.0	96.0	
	CM3d	36.0	25	370	150	250	300	0.0405	120	1250	1000	4.0	500	0.80	208.0	208.0	52.0	(F/SC)
	CM4d	36.0	25	370	150	250	300	0.0405	120	1000	1000	4.0	0	1.00	166.0	166.0	0.0	
Bryant et al. [28]	C5N	20.0	25	325	152	330	368	0.0258	76	2591	1619	4.9	1944	0.62	101.0	163.5	98.2	
	E5N	27.0	25	325	152	330	368	0.0258	76	2591	1619	4.9	1944	0.62	90.0	145.7	87.5	
	C11N	25.0	25	326	152	330	368	0.0258	76	2591	1619	4.9	1944	0.62	74.0	119.8	71.9	
	E11N	22.0	25	326	152	330	368	0.0258	76	2591	1619	4.9	1944	0.62	73.0	118.2	71.0	
	C11-0	25.0	25	283	203	330	368	0.0245	76	2591	1619	4.9	1944	0.62	126.0	204.0	122.5	
Cavagnis et al. [15]	SC52	36.8	16	713	250	556	600	0.0089	200	5600	3360	6.0	4480	0.60	59.5	199.8	133.2	
	SC52a	36.8	16	713	250	556	600	0.0089	200	5600	3360	6.0	4480	0.60	77.0	258.7	172.5	Failure M+

Table A2.5 Cantilever and continuous beams without shear reinforcement subjected to distributed load

Reference	Specimen	f_c [MPa]	d_g [mm]	f_y [MPa]	b [mm]	d [mm]	h [mm]	ρ [-]	*plate* [mm]	l [mm]	l_C [mm]	l_C/d [mm]	l_{SS} [mm]	V_{right}/ql [kN]	q [kN/m]	V_{right} [kN]	V_{left} [kN]	Remarks[a]
	SC52b	36.8	16	713	250	556	600	0.0089	200	5600	3360	6.0	4480	0.60	85.0	285.6	190.4	Failure M+
	SC53	33.2	16	713	250	556	600	0.0089	200	5600	3920	7.1	3360	0.70	40.2	157.7	67.6	
	SC54	36.5	16	713	250	556	600	0.0089	200	5600	4480	8.1	2240	0.80	40.6	182.1	45.5	
	SC55	33.7	16	713	250	556	600	0.0089	200	5600	5040	9.1	1120	0.90	33.4	168.2	18.7	
	SC56	35.3	16	713	250	556	600	0.0089	200	5600	5600	10.1	0	1.00	28.2	157.8	0.0	
	SC57	33.2	16	713	250	556	600	0.0089	200	4900	4900	8.8	0	1.00	30.0	147.1	0.0	
	SC58	36.1	16	713	250	556	600	0.0089	200	4200	4200	7.6	0	1.00	50.6	212.5	0.0	F/SC
	SC59	35.5	16	713	250	556	600	0.0089	200	3500	3500	6.3	0	1.00	52.3	183.2	0.0	
	SC62	35.8	16	713	250	556	600	0.0089	200	2800	2800	5.0	0	1.00	62.1	173.7	0.0	
	SC66	31.2	16	713	250	556	600	0.0089	200	2100	2100	3.8	0	1.00	91.4	191.9	0.0	
	SC63	33.6	16	760	250	559	600	0.0054	200	3500	3500	6.3	0	1.00	60.8	212.8	0.0	F/SC
	SC60	36.9	16	760	250	559	600	0.0054	200	2800	2800	5.0	0	1.00	58.9	164.8	0.0	
Klaus [29]	TCA1	36.4	20	683	610	159	203	0.0051	0	1827	1015	6.4	1623	0.56	239.4	243.0	194.3	
	TCA2	52.4	20	683	610	159	203	0.0051	0	1827	1015	6.4	1623	0.56	209.8	212.9	170.3	
	TCA3	60.7	20	683	610	159	203	0.0051	0	1827	1015	6.4	1623	0.56	225.5	228.9	183.0	
	TCA4	38.6	20	468	610	151	203	0.0139	0	1827	1015	6.7	1623	0.56	285.5	289.8	231.7	
	TCA5	44.7	20	468	610	151	203	0.0139	0	1827	1015	6.7	1623	0.56	302.3	306.8	245.3	
	TCA6	61.2	20	468	610	151	203	0.0139	0	1827	1015	6.7	1623	0.56	307.8	312.4	249.8	
	TCF1	68.1	20	624	610	109	152	0.0053	0	1357	762	7.0	1189	0.56	239.0	182.1	142.1	
	TCF4R	59.5	20	624	610	260	305	0.0045	0	2608	1524	5.9	2168	0.58	167.1	254.7	181.1	(F/SC)
	TCS2R	64.0	20	468	610	151	203	0.0139	0	1828	1016	6.7	1623	0.56	258.0	262.1	209.4	Failure M+
	TCS4	58.4	20	624	610	245	305	0.0144	0	2902	1525	6.2	2754	0.53	253.8	387.0	349.5	Failure M+
Pérez Caldentey et al. [30]	CR1	31.1	20	835	250	562	600	0.0079	210	3300	3300	5.9	0	1.00	52.7	174.0	0.0	
	CR2	33.6	20	835	250	562	600	0.0079	210	3300	3300	5.9	0	1.00	57.8	190.7	0.0	
Richart [31]	502A	24.3	25	420	1828	406	450	0.0054	305	1372	1372	3.4	0	1.00	898.7	1232.7	0.0	l/d<3.5 F/SC
	502B	22.7	25	420	1828	406	450	0.0054	305	1372	1372	3.4	0	1.00	937.6	1286.1	0.0	l/d<3.5 F/SC
	503A	24.4	25	420	1828	406	450	0.0054	305	1372	1372	3.4	0	1.00	950.6	1303.9	0.0	l/d<3.5 F/SC
	503B	24.0	25	420	1828	406	450	0.0054	305	1372	1372	3.4	0	1.00	892.2	1223.8	0.0	l/d<3.5 F/SC
	505A	25.4	25	420	1524	406	450	0.0068	305	1525	1525	3.8	0	1.00	799.3	1219.0	0.0	F/SC
	505B	25.7	25	420	1524	406	450	0.0068	305	1525	1525	3.8	0	1.00	765.6	1167.5	0.0	F/SC
	506A	23.1	25	420	1524	406	450	0.0068	305	1525	1525	3.8	0	1.00	729.2	1112.0	0.0	F/SC
	506B	26.3	25	420	1524	406	450	0.0068	305	1525	1525	3.8	0	1.00	729.2	1112.0	0.0	F/SC
Tung et al. [25][b]	SV3.1	32.5	18	670	170	407	450	0.0074	200	2500	2500	6.1	0	1.00		77.4	0.0	
	SV3.2	32.4	18	670	170	407	450	0.0074	200	2500	2500	6.1	0	1.00		87.7	0.0	
	SV4.1	33.2	18	670	170	403	450	0.0143	200	2500	2500	6.2	0	1.00		100.5	0.0	
	SV4.2	33.0	18	670	170	403	450	0.0143	200	2500	2500	6.2	0	1.00		94.1	0.0	
	SV5.1	33.2	18	670	170	403	450	0.0143	200	2900	2900	7.2	0	1.00		120.0	0.0	
	SV5.2	33.1	18	670	170	403	450	0.0155	200	2900	2900	7.2	0	1.00		110.8	0.0	
	SV6.1	33.8	18	670	170	405	450	0.0091	200	5000	2877	7.1	4186	0.58		128.8	88.0	Failure M+
	SV6.2	33.3	18	670	170	407	450	0.0074	200	5000	2797	6.9	4349	0.56		104.0	77.1	Failure M+
	SV7.1	33.3	18	670	170	407	450	0.0074	200	5000	2953	7.3	4031	0.59		64.1	40.4	VL
	SV7.2	33.2	18	670	170	407	450	0.0074	200	5000	2975	7.3	3987	0.60		50.0	30.8	VL

Table A2.5 Cantilever and continuous beams without shear reinforcement subjected to distributed load

Reference	Specimen	f_c [MPa]	d_g [mm]	f_y [MPa]	b [mm]	d [mm]	h [mm]	ρ [-]	*plate* [mm]	l [mm]	l_C [mm]	l_C/d [mm]	l_{SS} [mm]	V_{right}/ql [kN]	q [kN/m]	V_{right} [kN]	V_{left} [kN]	Remarks[a]
	SV8	33.3	18	670	170	407	450	0.0074	200	5000	2829	7.0	4284	0.57		88.1	63.2	VL
Uzel et al. [26]	AP3	35.8	6	505	113	230	250	0.0116	150	500	500	2.2	0	1.00	294.0	147.0	0.0	l/d<3.5 F/SC
	AP4	35.8	6	505	113	230	250	0.0116	150	750	750	3.3	0	1.00	94.7	71.0	0.0	l/d<3.5
	AF1	43.0	10	550	300	925	1000	0.0076	150	2997	2997	3.2	0	1.00	197.9	593.0	0.0	l/d<3.5 F/SC
	AF3	27.3	19	475	300	617	670	0.0076	150	2997	2997	4.9	0	1.00	90.3	270.5	0.0	
	AF11	36.2	19	562	300	925	1000	0.0076	150	2000	2000	2.2	0	1.00	661.3	1322.6	0.0	l/d<3.5 F/SC
	AF13	35.7	19	475	300	865	1000	0.0216	150	3000	3000	3.5	0	1.00	309.5	928.5	0.0	l/d<3.5 F/SC
	AF6	32.2	19	562	300	617	670	0.0076	150	1890	1890	3.1	0	1.00	216.3	408.8	0.0	l/d<3.5 F/SC
TNO [32]	A1L	19.6	8	500	150	150	180	0.0205	0	450	450	3.0	0	1.00	219.6	98.8	0.0	l/d<3.5 F/SC
	A1R	19.6	8	500	150	150	180	0.0205	0	450	450	3.0	0	1.00	288.4	129.8	0.0	l/d<3.5 F/SC
	A2L	21.7	8	500	150	150	180	0.0205	0	675	450	3.0	450	0.67	211.1	95.0	47.5	l_c/d<3.5 F/SC
	A2R	21.7	8	500	150	150	180	0.0205	0	675	450	3.0	450	0.67	233.1	104.9	52.5	l_c/d<3.5 F/SC
	A3L	21.0	8	500	150	150	180	0.0205	0	768	450	3.0	636	0.59	189.6	85.3	60.3	l_c/d<3.5 F/SC
	A3R	21.0	8	500	150	150	180	0.0205	0	768	450	3.0	636	0.59	173.1	77.9	55.1	l_c/d<3.5 F/SC
	A4L	23.1	8	500	150	150	180	0.0205	0	840	450	3.0	779	0.54	129.1	58.1	50.3	Failure M+
	A4R	23.1	8	500	150	150	180	0.0205	0	840	450	3.0	779	0.54	172.4	77.6	67.2	Failure M+
	B1L	19.8	8	500	150	150	180	0.0205	0	675	675	4.5	0	1.00	83.7	56.5	0.0	
	B1R	19.8	8	500	150	150	180	0.0205	0	675	675	4.5	0	1.00	83.7	56.5	0.0	
	B2L	20.3	8	500	150	150	180	0.0205	0	1013	675	4.5	675	0.67	116.0	78.3	39.2	
	B2R	20.3	8	500	150	150	180	0.0205	0	1013	675	4.5	675	0.67	98.4	66.4	33.2	
	B3L	22.2	8	500	150	150	180	0.0205	0	1152	675	4.5	955	0.59	99.0	66.8	47.2	Failure M+
	B3R	22.2	8	500	150	150	180	0.0205	0	1152	675	4.5	955	0.59	91.4	61.7	43.6	Failure M+
	B4L	23.3	8	500	150	150	180	0.0205	0	1260	675	4.5	1169	0.54	77.0	52.0	45.0	Failure M+
	B4R	23.3	8	500	150	150	180	0.0205	0	1260	675	4.5	1169	0.54	77.0	52.0	45.0	Failure M+
	C1L	22.7	8	500	150	150	180	0.0205	0	900	900	6.0	0	1.00	47.2	42.5	0.0	
	C1R	22.7	8	500	150	150	180	0.0205	0	900	900	6.0	0	1.00	45.6	41.0	0.0	
	C2L	19.0	8	500	150	150	180	0.0205	0	1350	900	6.0	900	0.67	57.0	51.3	25.7	
	C2R	19.0	8	500	150	150	180	0.0205	0	1350	900	6.0	900	0.67	67.0	60.3	30.2	
	C3R	26.0	8	500	150	150	180	0.0205	0	1536	900	6.0	1273	0.59	77.6	69.8	49.4	Failure M+
	C4L	23.7	8	500	150	150	180	0.0205	0	1679	900	6.0	1559	0.54	59.6	53.6	46.4	Failure M+
	A10L	23.7	8	500	150	150	180	0.0205	0	450	450	3.0	0	1.00	207.1	93.2	0.0	l_c/d<3.5 F/SC
	A10R	23.7	8	500	150	150	180	0.0205	0	450	450	3.0	0	1.00	203.6	91.6	0.0	l_c/d<3.5 F/SC

[a] Failure M+: failure within the region of positive bending moment; F/SC: flexural failure or shear compression failure with the crack not disturbing the development of the theoretical direct strut yielding an increase of the shear capacity; VL: Variable Load: position of the point of contraflexure was varied during testing. Specimens with l/d or l_C/d <3.5 failing within the region of negative bending moment and labelled with F/SC or VL are not considered for comparison with the models presented in the thesis; [b] the distributed load q was applied at a distance of 400 mm from the edge of the support plates and not on the entire length of the specimen

Table A2.6 Simply supported beams without shear reinforcement subjected to point load (LWC)

Referemce	Specimen	f_c [MPa]	d_g [mm]	f_y [MPa]	d [mm]	h [mm]	b [mm]	ρ [-]	*plate* [mm]	a [mm]	a/d [-]	V_{right} [kN]
Walraven [33]	B1	30.1		540	125	150	200	0.0083	31	375	3.00	29.8
	B2	30.1		440	420	450	200	0.0074	84	1260	3.00	60.5
	B3	27.8		440	720	750	200	0.0079	144	2160	3.00	79.2
	C1	31.4		440	125	150	200	0.0152	31	375	3.00	35.0
	C2	31.4		440	405	450	200	0.0156	84	1260	3.11	86.7
	C3	28.9		440	700	750	200	0.0158	144	2160	3.09	106.4
Tylor et al. [34]	B1	26.2		420	221	254	191	0.0188	51	838	3.80	39.3
	B2	26.0		420	221	254	191	0.0188	51	838	3.80	39.1
	B3	26.2		420	221	254	191	0.0188	51	838	3.80	38.1
	B4	29.5		420	221	254	191	0.0188	51	838	3.80	40.9
	B5	37.3		420	221	254	191	0.0188	51	838	3.80	44.0
	B6	35.0		420	221	254	191	0.0188	51	838	3.80	48.9
	B7	35.0		420	221	254	191	0.0188	51	838	3.80	39.3
	B8	39.4		420	221	254	191	0.0188	51	838	3.80	41.4
	B9	29.5		420	221	254	191	0.0121	51	838	3.80	35.2
	B10	26.0		420	221	254	191	0.0121	51	838	3.80	36.6
	B11	37.3		420	221	254	191	0.0121	51	838	3.80	36.1
	B12	39.4		420	221	254	191	0.0121	51	838	3.80	39.3
	C1	27.5		420	221	254	191	0.0188	51	838	3.80	38.7
	C2	28.2		420	221	254	191	0.0188	51	838	3.80	43.4
	C3	27.5		420	221	254	191	0.0188	51	838	3.80	43.8
	C4	29.0		420	221	254	191	0.0188	51	838	3.80	43.4
	C5	34.4		420	221	254	191	0.0188	51	838	3.80	48.5
	C6	39.8		420	221	254	191	0.0188	51	838	3.80	53.2
	C7	39.8		420	221	254	191	0.0188	51	838	3.80	48.2
	C8	35.6		420	221	254	191	0.0188	51	838	3.80	47.5
	C9	29.0		420	221	254	191	0.0121	51	838	3.80	38.4
	C10	28.2		420	221	254	191	0.0121	51	838	3.80	37.2
	C11	34.4		420	221	254	191	0.0121	51	838	3.80	40.2
	C12	35.6		420	221	254	191	0.0121	51	838	3.80	42.9
Ivey et al. [35]	1.2	31.6		420	267	305	152	0.0125		889	3.33	39.9
	1.3	33.0		420	267	305	152	0.0125		1321	4.95	34.0
	23.1	28.4		420	267	305	152	0.0093		889	3.33	36.7
	23.2	29.3		420	267	305	152	0.0125		889	3.33	38.1
	23.3	29.2		420	267	305	152	0.0146		889	3.33	41.7
	23.1s	26.2		420	267	305	152	0.0093		889	3.33	34.8
	23.2s	27.2		420	267	305	152	0.0125		889	3.33	40.4
	23.3s	28.5		420	267	305	152	0.0146		889	3.33	40.4
	27.2	26.1		420	267	305	152	0.0125		889	3.33	39.9
	27.3	24.0		420	267	305	152	0.0125		1321	4.95	28.1
	23.4	25.0		420	188	229	108	0.0125		627	3.33	17.3
	23.5	30.2		420	267	305	152	0.0125		889	3.33	37.2
	23.6	26.9		420	333	381	191	0.0125		1110	3.34	59.9
	23.7	26.4		420	395	451	225	0.0128		1318	3.34	77.1

Table A2.6 Simply supported beams without shear reinforcement subjected to point load (LWC)

Referemce	Specimen	f_c [MPa]	d_g [mm]	f_y [MPa]	d [mm]	h [mm]	b [mm]	ρ [-]	*plate* [mm]	a [mm]	a/d [-]	V_{right} [kN]
	23.12	23.0		420	267	305	152	0.0210		800	3.00	55.4
	23.13	22.5		420	267	305	152	0.0210		1067	4.00	39.1
	23.14	19.5		420	267	305	152	0.0210		1321	4.95	40.6
	23.15	22.0		420	267	305	152	0.0093		889	3.33	34.2
	23.16	19.5		420	267	305	152	0.0125		889	3.33	40.0
	23.17	27.1		420	267	305	152	0.0146		889	3.33	40.6

Table A2.7 Simply supported beams with low amount of transverse reinforcement subjected to point load

Reference	Specimen	f_c [MPa]	d_g [mm]	f_y [MPa]	b [mm]	d [mm]	h [mm]	ρ [-]	*plate* [mm]	a [mm]	a/d [-]	s_w	ρ_w[%]	f_{yw} [MPa]	V_{right} [kN]
Reineck et al. [2]	# 86 tests[a]	15.7–125.3	7-30	271-977	150-457	198-1200	270-1250	0.005–0.047			2.50-5.0	60-300	0.07-0.34	237-820	
Campana et al. [36]	SC12	41.5	16	580	302	354	405	0.0149	80	1220	3.4	150	0.062	497	179.0
	SC13	43.1	16	580	303	354	403	0.0106	80	1220	3.4	150	0.062	497	150.0
	SC16	56.0	16	580	302	346	402	0.0152	80	1220	3.5	150	0.062	497	199.0
	SC17	57.2	16	580	304	350	404	0.0107	80	1220	3.5	150	0.062	497	153.0
Huber et al. [37]	R250m35	35.9	22	550	75	230	250	0.0117	50	700	3.0	150	0.112	653	29.6
	R500m60	51.2	16	550	150	460	500	0.0117	100	1400	3.0	200	0.094	569	83.0
	R500m351	37.9	22	550	150	460	500	0.0117	100	1400	3.0	200	0.094	569	105.9
	R500m352	35.9	22	550	150	460	500	0.0117	100	1400	3.0	200	0.084	653	109.2
	R1000m60	60.9	16	550	300	920	1000	0.0125	200	2800	3.0	400	0.094	552	402.1
	R1000m35	29.6	22	550	300	920	1000	0.0125	200	2800	3.0	200	0.094	569	383.8
Yoon et al. [38]	N1-n	36.0	20	430	375	655	750	0.0286	150	2150	3.3	325	0.082	430	457.0
	N2-s	36.0	20	430	375	655	750	0.0286	150	2150	3.3	465	0.081	430	363.0
	N2-n	36.0	20	430	375	655	750	0.0286	150	2150	3.3	325	0.116	430	483.0
	M1-n	67.0	10	430	375	655	750	0.0286	150	2150	3.3	325	0.082	430	405.0
	M2-s	67.0	10	430	375	655	750	0.0286	150	2150	3.3	325	0.116	430	552.0
	M2-n	67.0	10	430	375	655	750	0.0286	150	2150	3.3	230	0.164	430	689.0
	H1-n	87.0	10	430	375	655	750	0.0286	150	2150	3.3	325	0.082	430	483.0
	H2-s	87.0	10	430	375	655	750	0.0286	150	2150	3.3	270	0.140	430	598.0
	H2-N	87.0	10	430	375	655	750	0.0286	150	2150	3.3	160	0.236	430	721.0

[a]Only the specimens respecting the following criteria were considered: (i) rectangular cross-section; (ii) $a/d \geq 2.5$; (iii) aggregate size specified.

Table A2.8 Simply supported beams without shear reinforcement and with steel fibres subjected to point load

Reference	Specimen	f_c [MPa]	d_g [mm]	f_y [MPa]	b [mm]	d [mm]	h [mm]	ρ [-]	*plate* [mm]	a [mm]	a/d [-]	*FT*	ρ_f [-]	l_f [mm]	α_f [-]	V_{right} [kN]	Remarks[a]
Ashour et al. [39]	B-4-0.5-A	95.4	10	460	125	215	250	0.0284		860	4.00	H	0.50	60	75	57.9	
	B-6-0.5-A	95.8	10	460	125	215	250	0.0284		1290	6.00	H	0.50	60	75	49.7	
	B-4-1.0-A	97.5	10	460	125	215	250	0.0284		860	4.00	H	1.00	60	75	80.8	F/SC
	B-4-1.5-A	97.1	10	460	125	215	250	0.0284		860	4.00	H	1.50	60	75	89.5	
	B-4-1.0-M	93.8	10	470	125	215	250	0.0458		860	4.00	H	1.00	60	75	97.5	
	B-6-1.0-M	95.0	10	470	125	215	250	0.0458		1290	6.00	H	1.00	60	75	73.6	
Barragan [40]	20-30-SFRC1	37.7	25		200	260	300	0.0283		910	3.50	H	0.50	60	67	111.0	
	20-30-SFRC2	38.8	25		200	260	300	0.0283		910	3.50	H	0.50	60	67	132.0	
	20-45-SFRC1	37.7	25		200	410	450	0.0308		1370	3.34	H	0.50	60	67	146.0	
	20-50-SFRC2	38.8	25		200	460	500	0.0241		1550	3.37	H	0.50	60	67	148.0	
	20-60-SFRC2	38.8	25		200	540	600	0.0273		1890	3.50	H	0.50	60	67	222.0	
Batson et al. [41]	A2	33.2	16		102	126	150	0.0310		605	4.80	P	0.22	25	100	26.7	
	B3	33.2	16		102	126	150	0.0310		554	4.40	P	0.22	25	100	31.6	
	C1	33.2	16		102	126	150	0.0310		529	4.20	P	0.22	25	100	31.5	
	C2	33.2	16		102	126	150	0.0310		529	4.20	P	0.22	25	100	28.0	
	C3	33.2	16		102	126	150	0.0310		529	4.20	P	0.22	25	100	25.2	
	D2	33.2	16		102	126	150	0.0310		542	4.30	P	0.22	25	100	29.6	
	D3	33.2	16		102	126	150	0.0310		542	4.30	P	0.22	25	100	28.0	
	E3	40.2	16		102	126	150	0.0310		529	4.20	P	0.44	25	100	33.0	
	F1	40.2	16		102	126	150	0.0310		504	4.00	P	0.44	25	100	33.2	
	F2	40.2	16		102	126	150	0.0310		504	4.00	P	0.44	25	100	31.2	
	F3	40.2	16		102	126	150	0.0310		504	4.00	P	0.44	25	100	33.2	
	G1	33.2	16		102	126	150	0.0310		554	4.40	P	0.22	25	100	28.4	
	G3	33.2	16		102	126	150	0.0310		554	4.40	P	0.22	25	100	27.0	
	L1	33.2	16		102	126	150	0.0310		504	4.00	C	0.22	25	75	30.1	
	L2	33.2	16		102	126	150	0.0310		504	4.00	C	0.22	25	75	30.2	
	L3	33.2	16		102	126	150	0.0310		504	4.00	C	0.22	25	75	33.2	
	M1	33.2	16		102	126	150	0.0310		580	4.60	C	0.22	25	75	25.9	
	M2	33.2	16		102	126	150	0.0310		554	4.40	C	0.22	25	75	27.1	
	M3	33.2	16		102	126	150	0.0310		554	4.40	C	0.22	25	75	25.7	
	N1	33.2	16		102	126	150	0.0310		630	5.00	C	0.22	25	75	24.4	
	N2	33.2	16		102	126	150	0.0310		605	4.80	C	0.22	25	75	26.9	
	O1	40.2	16		102	126	150	0.0310		504	4.00	C	0.44	25	75	31.5	
	P1	40.2	16		102	126	150	0.0310		529	4.20	C	0.44	25	75	33.8	
	P2	40.2	16		102	126	150	0.0310		529	4.20	C	0.44	25	75	30.1	
	P3	40.2	16		102	126	150	0.0310		529	4.20	C	0.44	25	75	32.5	
	R1	39.7	16		102	126	150	0.0310		403	3.20	C	0.88	25	75	36.7	
	R2	39.7	16		102	126	150	0.0310		428	3.40	C	0.88	25	75	34.3	
	S1	39.7	16		102	126	150	0.0310		428	3.40	C	0.88	25	75	33.1	
	S2	39.7	16		102	126	150	0.0310		428	3.40	C	0.88	25	75	41.9	
	S3	39.7	16		102	126	150	0.0310		428	3.40	C	0.88	25	75	39.5	
	U1	39.7	16		102	126	150	0.0310		353	2.80	C	1.76	25	75	56.3	
Casanova et al. [42]	HSFRC1	90.0	10		125	225	250	0.0357		653	2.90	H	1.30	30	60	154.4	
	HSFRC2	90.0	10		125	225	250	0.0357		653	2.90	H	1.30	30	60	153.3	F/SC

Table A2.8 Simply supported beams without shear reinforcement and with steel fibres subjected to point load

Reference	Specimen	f_c [MPa]	d_g [mm]	f_y [MPa]	b [mm]	d [mm]	h [mm]	ρ [-]	*plate* [mm]	a [mm]	a/d [-]	*FT*	ρ_f [-]	l_f [mm]	α_f [-]	V_{right} [kN]	Remarks[a]
	HSFRC3	90.0	10		125	225	250	0.0221		653	2.90	H	1.30	30	60	98.4	F/SC
Cucchiara et al. [43]	A10	40.9	10	435	150	218	249	0.0192		610	2.80	H	1.00	30	60	95.8	
	A20	43.2	10	435	150	218	249	0.0192		610	2.80	H	2.00	30	60	102.7	F/SC
Minelli et al. [44]	H500FRC	32.1	16		250	440	500	0.0112		1320	3.00	H	0.64	50	63	240.0	F/SC
	H500FRC	33.0	16		250	440	500	0.0112		1320	3.00	H	1.00	50	63	235.0	F/SC
	H1000FRC	32.1	16		250	940	1000	0.0107		2820	3.00	H	0.64	50	63	272.0	
	H1000FRC	33.0	16		250	940	1000	0.0107		2820	3.00	H	1.00	50	63	351.0	
	H1500FRC	32.1	16		250	1440	1500	0.0101		4320	3.00	H	0.64	50	63	484.0	
	H1500FRC	33.0	16		250	1440	1500	0.0101		4320	3.00	H	1.00	50	63	554.0	
Dinh et al. [45]	18-1a	44.8	10	455	152	381	455	0.0196	152	1310	3.44	H	0.75	30	55	170.6	F/SC
	18-1b	44.8	10	455	152	381	455	0.0196	152	1310	3.44	H	0.75	30	55	158.9	F/SC
	18-2a	38.1	10	455	152	381	455	0.0196	152	1310	3.44	H	1.00	30	55	175.2	F/SC
	18-2b	38.1	10	455	152	381	455	0.0196	152	1310	3.44	H	1.00	30	55	178.7	F/SC
	18-2c	38.1	10	455	152	381	455	0.0267	152	1310	3.44	H	1.00	30	55	200.2	F/SC
	18-2d	38.1	10	455	152	381	455	0.0267	152	1310	3.44	H	1.00	30	55	146.6	
	18-3a	31.0	10	455	152	381	455	0.0267	152	1310	3.44	H	1.50	30	55	148.3	
	18-3b	31.0	10	455	152	381	455	0.0267	152	1310	3.44	H	1.50	30	55	196.7	F/SC
	18-3c	44.9	10	455	152	381	455	0.0267	152	1310	3.44	H	1.50	30	55	190.1	
	18-3d	44.9	10	455	152	381	455	0.0267	152	1310	3.44	H	1.50	30	55	190.1	
	18-5a	49.2	10	455	152	381	455	0.0267	152	1310	3.44	H	1.00	60	80	170.6	
	18-5b	49.2	10	455	152	381	455	0.0267	152	1310	3.44	H	1.00	60	80	219.4	F/SC
	18-7a	43.3	10	455	152	381	455	0.0196	152	1310	3.44	H	0.75	30	79	190.5	F/SC
	18-7b	43.3	10	455	152	381	455	0.0196	152	1310	3.44	H	0.75	30	79	186.7	F/SC
	27-1a	50.8	10	455	203	610	685	0.0200	203	2135	3.50	H	0.75	30	55	361.9	F/SC
	27-1b	50.8	10	455	203	610	685	0.0200	203	2135	3.50	H	0.75	30	55	335.4	F/SC
	27-2a	28.7	10	455	203	610	685	0.0200	203	2135	3.50	H	0.75	60	80	345.0	F/SC
	27-2b	28.7	10	455	203	610	685	0.0200	203	2135	3.50	H	0.75	60	80	338.3	F/SC
	27-3a	42.3	10	455	203	610	685	0.0156	203	2135	3.50	H	0.75	30	55	338.3	F/SC
	27-3b	42.3	10	455	203	610	685	0.0156	203	2135	3.50	H	0.75	30	55	346.3	F/SC
	27-4a	29.6	10	455	203	610	685	0.0156	203	2135	3.50	H	0.75	60	80	269.5	F/SC
	27-4b	29.6	10	455	203	610	685	0.0156	203	2135	3.50	H	0.75	60	80	222.3	
	27-5a	44.4	10	455	203	610	685	0.0210	203	2135	3.50	H	1.50	30	55	429.1	F/SC
	27-6a	42.8	10	455	203	610	685	0.0210	203	2135	3.50	H	1.50	60	80	421.3	F/SC
Dupont et al. [46]	20	39.1	14	560	200	260	300	0.0181		650	2.50	H	0.25	60	65	108.2	
	29	26.5	14	560	200	260	300	0.0181		650	2.50	H	0.25	50	45	99.8	
	30	27.2	14	560	200	260	300	0.0181		650	2.50	H	0.75	50	45	120.1	
	21	38.6	14	560	200	260	300	0.0181		650	2.50	H	0.75	60	65	144.0	
	32	46.8	14	560	200	260	300	0.0181		650	2.50	H	0.50	60	65	157.6	
	2	46.4	14	560	200	260	300	0.0355		900	3.46	H	0.25	60	65	110.2	
	3	43.2	14	560	200	260	300	0.0355		900	3.46	H	0.50	60	65	120.1	
	4	47.6	14	560	200	260	300	0.0355		900	3.46	H	0.75	60	65	155.0	
	23	40.7	14	560	200	260	300	0.0181		1050	4.04	H	0.25	60	65	82.7	
	24	42.4	14	560	200	260	300	0.0181		1050	4.04	H	0.75	60	65	117.0	

Table A2.8 Simply supported beams without shear reinforcement and with steel fibres subjected to point load

Reference	Specimen	f_c [MPa]	d_g [mm]	f_y [MPa]	b [mm]	d [mm]	h [mm]	ρ [-]	*plate* [mm]	a [mm]	a/d [-]	*FT*	ρ_f [-]	l_f [mm]	α_f [-]	V_{right} [kN]	Remarks[a]
Jain et al. [47]	NH35	27.9	13	550	150	251	300	0.0267	100	875	3.49	H	1.00	35	65	109.2	
	NH35	26.2	13	550	150	251	300	0.0267	100	875	3.49	H	1.00	35	65	123.5	
	NH60	26.3	13	550	150	251	300	0.0267	100	875	3.49	H	1.00	60	80	116.0	
	NH60	27.1	13	550	150	251	300	0.0267	100	875	3.49	H	1.00	60	80	104.7	
	NC30	27.8	13	550	150	251	300	0.0267	100	875	3.49	C	1.00	30	50	78.7	
	NC30	27.2	13	550	150	251	300	0.0267	100	875	3.49	C	1.00	30	50	77.9	
	NC60	27.6	13	550	150	251	300	0.0267	100	875	3.49	C	1.00	60	85	98.6	
	NC60	27.9	13	550	150	251	300	0.0267	100	875	3.49	C	1.00	60	85	81.3	
	MH35	53.2	13	550	150	251	300	0.0267	100	875	3.49	H	1.00	35	65	144.2	F/SC
	MH35	55.3	13	550	150	251	300	0.0267	100	875	3.49	H	1.00	35	65	165.7	F/SC
	MH60	53.4	13	550	150	251	300	0.0267	100	875	3.49	H	1.00	60	80	128.0	
	MH60	51.0	13	550	150	251	300	0.0267	100	875	3.49	H	1.00	60	80	157.0	F/SC
	MC30	34.7	13	550	150	251	300	0.0267	100	875	3.49	C	1.00	30	50	99.4	
	MC30	36.2	13	550	150	251	300	0.0267	100	875	3.49	C	1.00	30	50	100.1	
	MC60	37.0	13	550	150	251	300	0.0267	100	875	3.49	C	1.00	60	85	110.3	
	MC60	38.3	13	550	150	251	300	0.0267	100	875	3.49	C	1.00	60	85	103.9	
Li et al. [48]		22.7	38	440	64	102	127	0.0220		306	3.00	H	1.00	30	60	20.5	F/SC
		22.7	38	440	64	102	127	0.0110		306	3.00	H	1.00	30	60	15.7	F/SC
		26.0	38	440	64	102	127	0.0220		306	3.00	H	1.00	50	100	23.0	F/SC
		53.0	2	440	64	102	127	0.0220		306	3.00	C	1.00	25	29	16.5	
		53.0	2	440	127	204	228	0.0220		612	3.00	C	1.00	25	29	50.5	
		50.2	2	440	64	102	127	0.0220		306	3.00	C	2.00	25	29	20.8	
		50.2	2	440	127	204	228	0.0220		612	3.00	C	2.00	25	29	66.3	
		62.6	2	440	64	102	127	0.0220		306	3.00	C	1.00	25	29	17.7	
		57.0	2	440	127	204	228	0.0220		612	3.00	C	2.00	25	29	61.4	
		62.6	2	440	64	102	127	0.0220		255	2.50	C	1.00	25	29	20.5	
		62.6	2	440	64	102	127	0.0220		281	2.75	C	1.00	25	29	17.8	
		57.0	2	440	64	102	127	0.0110		306	3.00	C	1.00	25	29	12.8	
		57.0	2	440	64	102	127	0.0330		306	3.00	C	1.00	25	29	17.8	
		57.0	2	440	64	102	127	0.0330		306	3.00	C	1.00	50	57	25.3	
Lim et al. [49]	2/0.5/2.5	34.0	10	404	152	221	254	0.0119		553	2.50	H	0.50	30	60	58.8	
	2/0.5/3.5	34.0	10	404	152	221	254	0.0119		774	3.50	H	0.50	30	60	45.1	F/SC
	2/1/2.5	34.0	10	404	152	221	254	0.0119		553	2.50	H	1.00	30	60	60.7	F/SC
	2/1/3.5	34.0	10	404	152	221	254	0.0119		774	3.50	H	1.00	30	60	47.0	F/SC
	4/0.5/2.5	34.0	10	404	152	221	254	0.0239		553	2.50	H	0.50	30	60	62.7	
	4/0.5/3.5	34.0	10	404	152	221	254	0.0239		774	3.50	H	0.50	30	60	49.0	
	4/1/2.5	34.0	10	404	152	221	254	0.0239		553	2.50	H	1.00	30	60	82.3	
	4/1/3.5	34.0	10	404	152	221	254	0.0239		774	3.50	H	1.00	30	60	66.6	
Mansur et al. [50]	B2	29.1	20		152	197	229	0.0134		552	2.80	H	0.50	30	60	52.5	
	B3	29.1	20		152	197	229	0.0134		709	3.60	H	0.50	30	60	45.0	
	C2	29.9	20		152	197	229	0.0134		552	2.80	H	0.75	30	60	60.6	
	C6	29.9	20		152	197	229	0.0200		552	2.80	H	0.75	30	60	65.0	
	E2	20.6	20		152	197	229	0.0134		552	2.80	H	0.75	30	60	44.8	
	E3	20.6	20		152	197	229	0.0200		552	2.80	H	0.75	30	60	59.8	

Table A2.8 Simply supported beams without shear reinforcement and with steel fibres subjected to point load

Reference	Specimen	f_c [MPa]	d_g [mm]	f_y [MPa]	b [mm]	d [mm]	h [mm]	ρ [-]	*plate* [mm]	a [mm]	a/d [-]	*FT*	ρ_f [-]	l_f [mm]	α_f [-]	V_{right} [kN]	Remarks[a]
	F3	33.4	20		152	197	229	0.0200		552	2.80	H	0.75	30	60	86.5	
Minelli et al. [51]	NSC1_SFRC1	24.8	20	512	200	435	480	0.0104		1090	2.51	H	0.38	30	50	134.0	
	NSC2_SFRC1	33.5	20	512	200	435	480	0.0104		1090	2.51	H	0.38	50	50	120.1	
	NSC3_SFRC1	38.6	20	512	200	435	480	0.0104		1090	2.51	H	0.38	30	50	140.9	
	HSC1_SFRC1	61.1	15	512	200	435	480	0.0104		1090	2.51		0.64	30	48	191.4	
	HSC1_SFRC2	58.3	15	512	200	435	480	0.0104		1090	2.51	H	0.64	30	79	222.7	F/SC
	NSC4_SFRC500_1	24.4	20	512	200	455	500	0.0099		1140	2.51	H	0.25	50	50	193.8	F/SC
	NSC4_SFRC500_1	24.4	20	512	200	455	500	0.0099		1140	2.51	H	0.25	50	50	153.8	
	NSC4_SFRC1000	24.4	20	512	200	910	1000	0.0103		2275	2.50	H	0.25	50	50	258.4	
	HSC2_SFRC1000	55.0	20	512	200	910	1000	0.0103		2275	2.50	H	0.25	50	50	338.5	
Noghabai [52]	7C	69.3	18		200	410	500	0.0300	200	1200	2.93	H	0.50	60	86	264.0	
	8C	69.3	18		200	410	500	0.0300	200	1200	2.93	H	0.50	60	86	312.0	
	9C	60.2	18		200	410	500	0.0300	200	1200	2.93	H	0.75	60	86	339.0	
	10C	75.7	18		200	410	500	0.0300	200	1200	2.93	H	0.75	60	86	292.0	
	4D	60.2	18		300	570	700	0.0290	200	1700	2.98	H	0.75	60	86	509.0	
Parra-Montesinos et al. [53]	11	49.2	10	410	152	381	457	0.0267		1295	3.40	H	1.00	60	80	172.0	
	7	31.0	10	410	152	381	457	0.0267		1295	3.40	H	1.50	30	60	148.3	
	10	44.9	10	410	152	381	457	0.0267		1295	3.40	H	1.50	30	60	188.8	
	9	44.9	10	410	152	381	457	0.0267		1295	3.40	H	1.50	30	60	190.0	
	12	49.2	10	410	152	381	457	0.0267		1295	3.40	H	1.00	60	80	217.7	F/SC
	8	31.0	10	410	152	381	457	0.0267		1295	3.40	H	1.50	30	60	195.2	F/SC
	4	38.1	10	410	152	381	457	0.0267		1334	3.50	H	1.00	30	60	146.5	
	3	38.1	10	410	152	381	457	0.0267		1334	3.50	H	1.00	30	60	200.4	F/SC
	1	38.1	10	410	152	381	457	0.0196		1334	3.50	H	1.00	30	60	175.5	F/SC
	2	38.1	10	410	152	381	457	0.0196		1334	3.50	H	1.00	30	60	178.9	F/SC
Rosenbusch et al. [54]	1.2/21.2	46.9	10	500	200	260	300	0.0360		910	3.50	H	0.25	60	67	110.4	
	1.2/31.2/3	43.7	10	500	200	260	300	0.0360		910	3.50	H	0.51	60	67	120.3	
	1.2/41.2/4	48.3	10	500	200	260	300	0.0360		910	3.50	H	0.76	60	67	155.4	
	2.3/22.3/1	40.0	10	500	200	262	300	0.0120		655	2.50	H	0.25	60	67	82.9	
	2.3/32.3/3	38.7	10	500	200	262	300	0.0120		655	2.50	H	0.76	60	67	107.6	
	2.4/32.4/3	38.7	10	500	200	260	300	0.0180		650	2.50	H	0.76	60	67	142.3	
	2.6/22.6/1	41.2	10	500	200	260	300	0.0180		1040	4.00	H	0.25	60	67	83.4	
	2.6/32.6/3	40.3	10	500	200	260	300	0.0180		1040	4.00	H	0.76	60	67	115.5	
	120×30-SFRC-1	37.7	10	500	200	260	300	0.0280		910	3.50	H	0.50	60	67	111.7	
	120×45-SFRC-1	37.7	10	500	200	410	450	0.0310		1353	3.30	H	0.50	60	67	146.0	
	220×30-SFRC-2	38.8	10	500	200	260	300	0.0280		910	3.50	H	0.50	60	67	132.8	
	220×50-SFRC-2	38.8	10	500	200	460	500	0.0240		1564	3.40	H	0.50	60	67	149.0	
	220×60-SFRC-2	38.8	10	500	200	540	600	0.0270		1890	3.50	H	0.50	60	67	222.0	
Sahoo [55]	M20-075	32.9	20	415	150	261	300	0.0195		900	3.45	H	0.75	60	80	108.5	F/SC
	M20-1	23.8	20	415	150	261	300	0.0195		900	3.45	H	1.00	60	80	93.2	F/SC
	M20_1.25	24.1	20	415	150	261	300	0.0195		900	3.45	H	1.25	60	80	113.6	F/SC
Schantz [56]	2	33.7	10		305	546	610	0.0184		1529	2.80	C	0.50	76	80	232.0	
	3	31.5	10		305	546	610	0.0184		1529	2.80	C	1.00	76	80	289.7	

Table A2.8 Simply supported beams without shear reinforcement and with steel fibres subjected to point load

Reference	Specimen	f_c [MPa]	d_g [mm]	f_y [MPa]	b [mm]	d [mm]	h [mm]	ρ [-]	*plate* [mm]	a [mm]	a/d [-]	*FT*	ρ_f [-]	l_f [mm]	α_f [-]	V_{right} [kN]	Remarks[a]
	4	32.8	10		305	546	610	0.0184		1529	2.80	C	1.50	76	80	333.8	
Shoaib et al. [57]	N31	23.0	10	404	310	258	308	0.025	150	924	3.58	H	1.00	30	55	211.0	F/SC
	N61	23.0	10	404	300	531	600	0.0188	150	1800	3.39	H	1.00	30	55	252.0	
	N62	23.0	10	404	300	523	600	0.0255	150	1800	3.44	H	1.00	30	55	242.0	
	H31	41.0	10	404	310	258	308	0.025	150	924	3.58	H	1.00	30	55	278.0	F/SC
	N32	41.0	10	404	310	240	308	0.0403	150	924	3.85	H	1.00	30	55	281.0	
	H62	41.0	10	404	300	523	600	0.0255	150	1800	3.44	H	1.00	30	55	444.0	
	N10-1	41.0	10	404	300	923	1000	0.0144	150	3000	3.25	H	1.00	30	55	492.0	
	N10-2	41.0	10	404	300	920	1000	0.0203	150	3000	3.26	H	1.00	30	55	497.0	
	H32	80.0	10	404	310	240	308	0.0403	150	924	3.85	H	1.00	30	55	458.0	F/SC
	H10-1	80.0	10	404	300	923	1000	0.0144	150	3000	3.25	H	1.00	30	55	646.0	F/SC
	H10-2	80.0	10	404	300	920	1000	0.0203	150	3000	3.26	H	1.00	30	55	644.0	
Swamy et al. [58]	B52	35.5	10	460	175	210	250	0.0400		945	4.50	C	0.40	50	100	78.8	
	B53	37.4	10	460	175	210	250	0.0400		945	4.50	C	0.80	50	100	114.6	
	B54	39.8	10	460	175	210	250	0.0400		945	4.50	C	1.20	50	100	115.9	
	B55	38.2	10	460	175	210	250	0.0305		945	4.50	C	0.80	50	100	118.1	F/SC

[a] F/SC: flexural failure or shear compression failure with the crack not disturbing (or partially disturbing) the development of the theoretical direct strut. Specimens labelled with F/SC are not considered for comparison with the models presented in the thesis

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