

Dowel type connections in laminated bamboo with multiple slotted-in steel plates

Annex I - Moisture content measurements

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Bedrijf: Technische Universiteit Delft
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Afdeling: Faculteit Civiele Techniek en Geowetenschappen

Opleiding: Civiele Techniek
Hoofdprofiel: Structural Engineering
Uitstroomprofiel: Staal en houtconstructie

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		Date	Mass [g]	L [mm]	B [mm]	D [mm]	Hole [mm ³]	Density [kg/m ³]	Mass 12-08 [g]	Mass 16-08 [g]	Difference [%]	Moisture [%]
12.12 (1)	1	28/06/2016	11.60	72.10	19.50	12.30		671	10.49	10.48	-0.10	9.61
	2	28/06/2016	8.19	32.80	32.20	12.30		630	7.39	7.39	0.00	9.77
12.12 (2)	1	28/06/2016	8.01	33.10	27.20	12.30		723	7.22	7.21	-0.10	9.91
	2	28/06/2016	11.15	72.50	19.70	12.30		635	10.05	10.04	-0.10	9.91
12.12 (3)	1	28/06/2016	8.28	72.80	13.80	12.30		670	7.54	7.53	-0.09	8.98
	2	28/06/2016	10.79	71.70	18.00	12.30		680	9.78	9.77	-0.08	9.40
12.12 (4)	1	28/06/2016	11.03	70.50	17.80	12.30		715	10.05	10.04	-0.10	8.93
	2	28/06/2016	11.01	72.20	18.30	12.25		680	10.02	10.01	-0.10	9.04
12.12 (5)	1	28/06/2016	12.09	71.60	20.80	12.30		660	11.02	11.01	-0.09	8.89
	2	28/06/2016	10.55	71.75	16.95	12.30		705	9.56	9.55	-0.09	9.43
36.36 (1)	1	28/06/2016	33.47	72.50	19.30	36.00		664	30.51	30.48	-0.10	8.89
	2	28/06/2016	40.98	72.70	24.20	36.40		640	37.52	37.49	-0.08	8.48
36.36 (2)	1	28/06/2016	45.92	72.70	25.90	36.30		672	41.69	41.65	-0.10	9.26
	2	28/06/2016	38.09	72.60	22.50	36.30		642	34.50	34.47	-0.09	9.46
36.36 (3)	1	30/06/2016	32.54	72.20	18.00	36.10		694	28.82	28.79	-0.09	11.47
	2	30/06/2016	20.69	72.00	12.00	35.50		675	18.64	18.62	-0.11	9.96
36.36 (4)	1	05/07/2016	10.71	72.00	6.35	36.20		647	9.73	9.72	-0.10	9.20
	2	05/07/2016	9.14	72.20	5.45	36.10		643	8.31	8.31	0.00	9.08
36.36 (5)	1	05/07/2016	10.77	72.00	6.50	36.00		639	9.82	9.82	0.00	8.82
	2	05/07/2016	11.63	72.00	6.80	35.80		664	10.44	10.45	0.10	10.19
72.72 (1)	1	05/07/2016	36.15	72.30	72.90	10.50		653	32.95	32.92	-0.09	8.89
	2	05/07/2016	35.05	72.20	72.20	10.10		666	32.05	32.02	-0.09	8.60
72.72 (2)	1	06/07/2016	35.12	72.30	72.50	9.60		698	31.83	31.80	-0.09	9.41
	2	06/07/2016	35.88	72.50	71.40	10.60		654	32.54	32.52	-0.06	9.34
72.72 (3)	1	06/07/2016	36.96	72.10	72.10	10.20		697	33.52	33.49	-0.09	9.35
	2	06/07/2016	33.70	72.10	72.10	10.30		629	30.79	30.76	-0.10	8.68
72.72 (4)	1	06/07/2016	32.55	72.20	72.20	9.50		657	29.69	29.66	-0.10	8.83
	2	06/07/2016	37.05	72.00	72.20	10.30		692	33.76	33.73	-0.09	8.92
72.72 (5)	1	06/07/2016	34.40	72.50	72.50	9.90		661	31.49	31.46	-0.10	8.50
	2	06/07/2016	36.02	72.40	72.10	10.20		677	32.77	32.74	-0.09	9.06
12.24.12 (1)	1	29/06/2016	13.24	72.50	23.30	12.30		637	11.80	11.81	0.08	10.84
	2	29/06/2016	19.96	71.90	18.10	24.10		636	18.27	18.27	0.00	8.47
	3	29/06/2016	12.29	72.00	21.40	12.30		648	11.13	11.13	0.00	9.44
12.24.12 (2)	1	29/06/2016	10.97	72.70	17.20	12.30		713	9.88	9.88	0.00	9.94
	2	29/06/2016	19.26	72.30	15.40	24.10		718	17.73	17.71	-0.11	8.00
	3	29/06/2016	10.44	71.90	17.20	12.30		686	9.50	9.49	-0.11	9.05
12.24.12 (3)	1	29/06/2016	11.43	72.30	20.10	12.30		639	10.26	10.26	0.00	10.24
	2	29/06/2016	21.62	72.30	17.60	24.00		708	19.49	19.47	-0.10	9.90
	3	29/06/2016	12.34	72.10	20.20	12.30		689	11.13	11.13	0.00	9.81

12.24.12 (4)	1	30/06/2016	12.68	71.80	21.00	12.30		684	11.46	11.46	0.00	9.62
	2	30/06/2016	18.44	71.60	17.10	24.00		628	16.76	16.76	0.00	9.11
	3	30/06/2016	9.32	72.15	15.50	12.30		678	8.43	8.45	0.24	9.44
12.24.12 (5)	1	30/06/2016	10.07	71.40	16.70	12.30		687	9.10	9.11	0.11	9.58
	2	30/06/2016	17.78	71.9	16.6	24.1		618	16.04	16.04	0.00	9.79
	3	30/06/2016	10.51	72.5	15.8	12.3		746	9.49	9.50	0.11	9.66
36.24.36 (1)	1	06/07/2016	17.6	72.2	36	10		677	16.09	16.07	-0.12	8.64
	2	06/07/2016	11.91	72.2	23.8	9.9		700	10.90	10.91	0.09	8.44
	3	06/07/2016	16.52	72.4	36.1	10		632	15.02	15.02	0.00	9.08
36.24.36 (2)	1	07/07/2016	17.48	72.80	36.80	10.00		652	15.93	15.93	0.00	8.87
	2	07/07/2016	11.18	72.5	23.8	10		648	10.25	10.26	0.10	8.27
	3	07/07/2016	17.39	72.2	36.4	9.9		668	15.61	15.63	0.13	10.18
36.24.36 (3)	1	07/07/2016	17.73	72.2	35.9	10.3		664	16.06	16.04	-0.12	9.48
	2	07/07/2016	12.35	72.7	19.8	9.8		875	11.28	11.28	0.00	8.66
	3	07/07/2016	17.61	72.2	35.95	10.15		668	15.78	15.76	-0.13	10.45
36.24.36 (4)	1	07/07/2016	17.35	72.4	36.1	10		664	15.85	15.83	-0.13	8.70
	2	07/07/2016	10.45	72.5	19.9	10		724	9.42	9.44	0.21	9.76
	3	07/07/2016	17.11	72.5	36.2	10.2		639	15.50	15.50	0.00	9.41
36.24.36 (5)	1	07/07/2016	17.26	72.4	35.95	10.2		650	15.49	15.48	-0.06	10.28
	2	07/07/2016	11.12	72	23.8	10.4		624	10.06	10.07	0.10	9.49
	3	07/07/2016	16.17	72.2	36.1	9.9		627	14.71	14.74	0.20	8.94
72.24.72 (1)	geheel	08/07/2016	2590.1	170	318	72	38453	672				
	1	08/07/2016	36.36	71.9	72.6	10.6		657	33.43	33.41	-0.06	8.09
	2	08/07/2016	11.44	72.7	23.9	10.7		615	10.39	10.40	0.10	9.13
	3	08/07/2016	34.29	72.1	72.6	10.7		612	31.11	31.07	-0.13	9.33
72.24.72 (2)	geheel	08/07/2016	2512.6	168	318	72	38001	660				
	1	08/07/2016	31.58	72	71.9	9.7		629	28.68	28.67	-0.03	9.20
	2	08/07/2016	11.62	72.2	23.9	10		673	10.58	10.58	0.00	8.95
	3	08/07/2016	32.6	72.3	72.3	9.6		650	29.68	29.65	-0.10	9.00
72.24.72 (3)	geheel	11/07/2016	2489.2	168	318	72	38001	654				
	1	11/07/2016	36.53	72.3	72.3	10.7		653	33.14	33.10	-0.12	9.33
	2	11/07/2016	11.31	71.5	24	10.5		628	10.21	10.21	0.00	9.73
	3	11/07/2016	34.31	72.5	71.9	10.5		627	31.26	31.22	-0.13	8.95
72.24.72 (4)	geheel	11/07/2016	2495.7	169	318	72	38227	651				
	1	11/07/2016	34.87	72.4	72.1	10.2		655	31.94	31.91	-0.09	8.45
	2	11/07/2016	11.73	71.8	23.7	10.4		663	10.47	10.46	-0.10	10.78
	3	11/07/2016	34.03	71.8	72.5	10.5		623	30.99	30.97	-0.06	8.96
72.24.72 (5)	geheel	11/07/2016	2588.6	167	318	72	37775	684				
	1	11/07/2016	34.87	71.6	72.4	10.3		653	31.58	31.57	-0.03	9.45
	2	11/07/2016	11.97	72	23.6	10.6		665	10.80	10.81	0.09	9.73
	3	11/07/2016	38.01	72.1	72.4	10.4		700	34.55	34.55	0.00	9.10
12.144.12 (1)	geheel	11/07/2016	2561.8	169	318	72	38227	669				

	1	11/07/2016	6.31	72.5	12.3	10.8		655	5.68	5.69	0.18	9.90
	2	11/07/2016	36.73	71.9	72.1	10.6		668	33.90	33.91	0.03	7.69
	3	11/07/2016	34.81	72.4	71.9	10.1		662	31.54	31.54	0.00	9.39
	4	11/07/2016	6.03	71.7	12.3	10.8		633	5.47	5.47	0.00	9.29
12.144.12 (2)	geheel	12/07/2016	2531.8	169	318	72	38227	661				
	1	12/07/2016	5.81	70.8	12.2	10.5		641	5.20	5.19	-0.19	10.59
	2	12/07/2016	34.62	72.3	72.2	10.1		657	31.35	31.32	-0.10	9.49
	3	12/07/2016	33.68	71.9	72.5	10.5		615	30.67	30.64	-0.10	8.98
	4	12/07/2016	6.38	72	12.2	10.3		705	5.76	5.75	-0.17	9.80
12.144.12 (3)	geheel	12/07/2016	2569.9	169	318	72	38227	671				
	1	12/07/2016	6.14	72.9	12.5	10.5		642	5.57	5.56	-0.18	9.36
	2	12/07/2016	33.79	71.1	72.6	10.2		642	30.44	30.42	-0.07	9.94
	3	12/07/2016	35.98	72	72.5	10.2		676	32.48	32.46	-0.06	9.76
	4	12/07/2016	6.01	72.2	12.5	10.1		659	5.45	5.44	-0.18	9.40
12.144.12 (4)	geheel	12/07/2016	2544.4	168	318	72	38001	668				
	1	12/07/2016	5.7	72.5	12.2	10.2		632	5.14	5.14	0.00	9.82
	2	12/07/2016	32.95	72	72.2	10.6		598	30.08	30.07	-0.03	8.73
	3	12/07/2016	33.03	72.1	72	10		636	30.09	30.07	-0.07	8.93
	4	12/07/2016	6.2	71.7	12.2	10.4		682	5.60	5.59	-0.18	9.76
12.144.12 (5)	geheel	12/07/2016	2596.5	169	318	72	38227	678				
	1	12/07/2016	5.91	71.5	12.2	10.3		658	5.32	5.31	-0.19	10.07
	2	12/07/2016	36.65	71.8	72.4	10.5		671	33.44	33.43	-0.03	8.77
	3	12/07/2016	35.7	72.6	72.4	10.5		647	32.43	32.41	-0.06	9.19
	4	12/07/2016	6.22	72	12.2	10.2		694	5.63	5.61	-0.36	9.65
36.144.36 (1)	geheel	12/07/2016	3316.3	216	318	72	48858	677				
	1	12/07/2016	17.7	72	10.2	36.2		666	16.01	16.00	-0.06	9.58
	2	12/07/2016	34.81	72	72.2	10.3		650	31.71	31.68	-0.09	8.95
	3	12/07/2016	33.44	72.2	72.5	10		639	30.44	30.41	-0.10	9.02
	4	12/07/2016	17.57	72.2	10.5	36		644	16.01	16.00	-0.06	8.91
36.144.36 (2)	geheel	13/07/2016	3232.9	216	318	72	48858	660				
	1	13/07/2016	18	71.2	35.8	10.3		686	16.08	16.07	-0.06	10.69
	2	13/07/2016	34.7	72.5	72.4	10.2		648	31.65	31.62	-0.09	8.83
	3	13/07/2016	36.75	72.2	72.4	10		703	33.32	33.29	-0.09	9.37
	4	13/07/2016	18.23	72.3	36	10.1		693	16.64	16.63	-0.06	8.75
36.144.36 (3)	geheel	13/07/2016	3342.9	216	318	72	48858	683				
	1	13/07/2016	18.67	72.1	36	10.4		692	16.94	16.92	-0.12	9.32
	2	13/07/2016	30.97	71.4	72	8.8		685	27.81	27.79	-0.07	10.24
	3	13/07/2016	34.71	72.5	72.4	10.8		612	31.80	31.79	-0.03	8.40
	4	13/07/2016	19.23	72.2	36	10.5		705	17.50	17.48	-0.11	9.05
36.144.36 (4)	geheel	13/07/2016	3355.6	217	318	72	49084	682				
	1	13/07/2016	17.8	72.3	36.2	10.2		667	15.94	15.92	-0.13	10.51
	2	13/07/2016	35.26	72.5	72.3	10		673	32.35	32.34	-0.03	8.27

	3	13/07/2016	35.43	73	72.8	9.5		702	32.19	32.17	-0.06	9.17
	4	13/07/2016	18.08	72.7	36.1	9.8		703	16.45	16.43	-0.12	9.07
36.144.36 (5)	geheel	13/07/2016	3401.2	217	318	72	49084	691				
	1	13/07/2016	18.81	72.5	36.1	10.3		698	17.19	17.18	-0.06	8.64
	2	13/07/2016	36.05	72	72.6	9.9		697	32.79	32.77	-0.06	9.07
	3	13/07/2016	34.81	72.3	72.6	10		663	31.85	31.83	-0.06	8.53
	4	13/07/2016	19.01	72.8	36	10.3		704	17.38	17.37	-0.06	8.60
72.144.72 (1)	geheel	13/07/2016	4385.3	288	318	72	65144	672				
	1	13/07/2016	34.78	72.5	72.5	9.8		675	31.85	31.83	-0.06	8.45
	2	13/07/2016	34.23	71.3	72.4	10		663	31.40	31.39	-0.03	8.28
	3	13/07/2016	32.77	72.1	72.3	10.5		599	29.90	29.87	-0.10	8.80
	4	13/07/2016	36.23	71.8	71.2	9.9		716	32.34	32.33	-0.03	10.75
72.144.72 (2)	geheel	14/07/2016	4441.2	288	318	72	65144	680				
	1	14/07/2016	36.32	71	73	10.3		680	32.75	32.74	-0.03	9.84
	2	14/07/2016	36.1	72.2	71.8	10.2		683	32.63	32.61	-0.06	9.64
	3	14/07/2016	36.72	72.1	71.6	10.3		691	33.30	33.28	-0.06	9.34
	4	14/07/2016	36.71	72	72	10.4		681	33.41	33.38	-0.09	9.03
72.144.72 (3)	geheel	14/07/2016	4360.4	288	318	72	65144	668				
	1	14/07/2016	35.55	72.8	72.2	10		676	32.36	32.33	-0.09	9.02
	2	14/07/2016	35.93	72.5	72	10.5		656	32.70	32.66	-0.12	9.05
	3	14/07/2016	35.09	72.2	72.2	10		673	31.99	31.96	-0.09	8.88
	4	14/07/2016	34.71	72	72	10		670	31.77	31.76	-0.03	8.48
72.144.72 (4)	geheel	14/07/2016	4374.7	288	318	72	65144	670				
	1	14/07/2016	35.73	72.1	71.6	10.5		659	32.54	32.51	-0.09	8.97
	2	14/07/2016	33.75	72.5	72	9.9		653	30.77	30.76	-0.03	8.84
	3	14/07/2016	34.87	72.4	71.8	9.7		692	31.73	31.71	-0.06	9.03
	4	14/07/2016	34.11	72.5	71.5	10.3		639	31.16	31.13	-0.10	8.69
72.144.72 (5)	geheel	14/07/2016	4400.1	288	318	72	65144	674				
	1	14/07/2016	30.9	72.2	72.4	8.9		664	28.23	28.21	-0.07	8.67
	2	14/07/2016	34.74	72	71.3	9.9		684	31.80	31.78	-0.06	8.49
	3	14/07/2016	35.18	71.9	71.9	10.4		654	32.20	32.17	-0.09	8.51
	4	14/07/2016	36.01	71.8	72.4	10.5		660	32.58	32.57	-0.03	9.54
							Mean	666.81	21.50	21.49	-0.05	9.26
							St. Dev	31.46				0.64
							COV	0.05				0.07
							5-Perc	611.45				8.14
								Density	Mass 12-08	Mass 16-08	Difference	Moisture
								[kg/m³]	[g]	[g]	[%]	[%]