

## Vedlegg

### Vedlegg A:

#### Materialdata for prøvestykker i bjelke 1 til

Prøvestykke	Antall årringer	Maks spenning	Densitet	Tv.Sn.Areal	Volum	Tøyningshastighet (s <sup>-1</sup> )
1.a.10Q	4	43.791	452.494	175.304	2696.171	0.1
1.a.10S	4	55.801	475.098	178.842	2736.275	6.5
1.a.10D	4	79.863	455.872	178.131	2720.062	2720.1
1.b.10Q						
1.b.10S						
1.b.10D						
2.a.10Q	3	43.500	374.820	176.479	2721.307	0.1
2.a.10S	3	52.401	424.681	177.186	2684.370	6.6
2.a.10D	3	59.156	341.162	176.715	2696.665	2696.7
2.b.10Q	3	35.655	372.063	176.244	2687.716	0.1
2.b.10S	3	46.998	392.821	176.715	2698.432	6.5
2.b.10D	3	57.813	354.482	178.131	2764.595	2764.6
3.a.10Q						
3.a.10S						
3.a.10D						
3.b.10Q	3	42.581	378.751	172.965	2693.062	0.1
3.b.10S	3	50.959	403.158	176.008	2678.848	6.6
3.b.10D	3	70.735	408.781	178.842	2739.852	2739.9
4.a.10Q	3	40.066	366.577	175.304	2673.381	0.1
4.a.10S	3	41.708	356.319	178.131	2750.345	6.5
4.a.10D	3	57.826	347.105	174.835	2650.493	2650.5
4.b.10Q	3	34.393	335.323	175.538	2683.983	0.1
4b.10S	3	41.468	327.764	176.244	2745.876	6.4
4.b.10D	3	62.672	369.608	176.950	2705.570	2705.6
5.a.10Q	12	56.389	515.405	176.950	2755.116	0.1
5.a.10S	12	56.231	481.234	177.422	2742.946	6.5
5.a.10D	12	85.266	463.861	177.422	2716.333	2716.3
5.b.10Q	7	49.210	424.819	174.366	2730.575	0.1
5.b.10S	7	56.007	439.727	178.131	2728.969	6.5
5.b.10D	7	78.484	436.190	178.605	2796.948	2796.9

#### Tabellforklaring:

- Q = kvasistatisk\_1
- S = kvasistatisk\_2
- D = dynamisk

## Vedlegg B:

### Materialdata for prøvestykker i bjelke 1 til 8.

Prøvestykker	Årringsbredde	Antall årringer	Maks spenning	E-modul	Densitet	Maks kraft	Tv.Sn.Areal	Volum
	[mm]		[N/mm <sup>2</sup> ]	[Mpa]	[kg/m <sup>3</sup> ]	[kN]	[mm <sup>2</sup> ]	[mm <sup>3</sup> ]
1.a.1	3.018	5	40.902	1560.438	452.604	7.315	178.842	6363.181
1.b.1	3.000	5	44.739	786.118	447.879	7.906	176.715	6296.341
2.a.1	5.007	3	36.444	1565.570	389.888	6.457	177.186	6258.214
2.b.1	3.765	4	38.446	889.875	365.846	6.848	178.131	6341.468
3.a.1	3.755	4	43.256	1580.666	395.160	7.664	177.186	6275.933
3.b.1								
4.a.1								
4.b.1	5.010	3	45.196	1064.618	436.357	8.019	177.422	6325.100
5.a.1	2.151	7	56.009	3224.882	486.659	9.977	178.131	6369.969
5.b.1	2.156	7	53.591	1237.807	478.203	9.584	178.842	6398.950
1.a.2	2.500	6	44.693	2243.001	430.755	7.898	176.715	6268.066
1.b.2	1.880	8	41.865	1996.312	433.587	7.438	177.658	6365.498
2.a.2	3.743	4	41.991	2544.423	401.275	7.391	176.008	6279.981
2.b.2								
3.a.2	3.788	4	37.450	762.170	434.902	6.751	180.267	6392.252
3.b.2	3.738	4	38.258	1530.122	390.580	6.716	175.538	6298.320
4.a.2								
4.b.2	5.017	3	46.245	872.612	428.201	8.227	177.895	6398.870
5.a.2	1.879	8	55.996	4423.588	480.428	9.935	177.422	6286.067
5.b.2	1.666	9	56.457	2374.037	492.456	9.964	176.479	6335.598
1.a.3								
1.b.3	3.793	4	50.948	3768.571	464.045	9.208	180.743	6421.792
2.a.3	7.570	2	34.991	2084.713	374.052	6.299	180.029	6416.221
2.b.3	7.455	2	32.084	1652.713	369.507	5.602	174.600	6278.629
3.a.3	7.535	2	43.631	883.994	416.926	7.782	178.368	6332.056
3.b.3	4.977	3	41.509	2119.257	417.757	7.267	175.069	6223.706
4.a.3								
4.b.3	7.445	2	35.876	909.539	361.220	6.247	174.132	6256.573
5.a.3	1.368	11	45.468	2017.070	471.322	8.089	177.895	6365.070
5.b.3	2.133	7	49.396	2341.504	454.657	8.648	175.069	6246.465
1.a.4	2.994	5	52.458	2638.662	519.383	9.233	176.008	6315.183
1.b.4	3.038	5	47.676	2160.908	490.709	8.640	181.220	6480.417
2.a.4	3.780	4	41.456	2113.007	420.680	7.444	179.553	6465.715
2.b.4	2.998	5	44.450	2781.538	439.402	7.845	176.479	6326.774
3.a.4	5.013	3	40.495	1192.458	393.905	7.194	177.658	6397.476
3.b.4	4.973	3	41.996	4465.634	411.626	7.342	174.835	6267.822
4.a.4	5.017	3	37.493	2298.972	361.358	6.670	177.895	6420.218
4.b.4	7.430	2	34.404	670.729	329.669	5.967	173.431	6188.029

5.a.4	2.537	6	42.952	4414.885	433.246	7.815	181.936	6555.162
5.b.4	2.984	5	45.719	8039.269	435.055	7.993	174.835	6252.087
1.a.5								
1.b.5	1.664	9	49.492	5002.249	456.963	8.723	176.244	6302.473
2.a.5	7.475	2	44.008	1664.912	403.254	7.725	175.538	6249.169
2.b.5	7.460	2	41.085	1791.587	381.206	7.183	174.835	6243.346
3.a.5	3.790	4	42.982	2519.605	394.275	7.758	180.505	6442.209
3.b.5	3.805	4	38.612	2523.892	382.253	7.025	181.936	6487.846
4.a.5	2.513	6	55.863	1960.858	533.087	9.977	178.605	6452.983
4.b.5	2.982	5	55.654	2339.850	534.490	9.717	174.600	6248.947
5.a.5	1.496	10	56.751	5062.364	519.772	9.975	175.773	6348.934
5.b.5	1.495	10	56.831	6997.537	528.322	9.976	175.538	6359.758
1.a.6	2.988	5	46.733	3259.036	446.641	8.192	175.304	6179.455
1.b.6	2.510	6	45.677	4366.338	463.902	8.137	178.131	6380.657
2.a.6	5.030	3	41.040	600.128	419.800	7.340	178.842	6336.355
2.b.6	5.043	3	49.622	2255.685	446.325	8.922	179.791	6452.696
3.a.6	2.986	5	43.993	4782.086	466.617	7.702	175.069	6214.953
3.b.6	3.750	4	43.388	2165.947	404.881	7.667	176.715	6322.848
4.a.6								
4.b.6	2.998	5	41.278	1350.000	451.292	7.285	176.479	6337.363
5.a.6	3.788	4	45.470	1309.106	476.153	8.197	180.267	6426.503
5.b.6	3.010	5	41.592	2745.533	473.242	7.399	177.895	6423.776
1.a.7	3.765	4	43.783	2012.566	451.112	7.799	178.131	6384.220
1.b.7	3.763	4	39.680	1350.871	445.742	7.059	177.895	6461.134
2.a.7	3.758	4	39.048	2430.102	387.953	6.928	177.422	6392.520
2.b.7	3.748	4	40.203	3293.017	406.193	7.095	176.479	6400.895
3.a.7	1.373	11	55.713	2821.538	527.365	9.977	179.079	6409.224
3.b.7	1.080	14	55.566	7661.217	500.826	9.977	179.553	6469.306
4.a.7	3.730	4	31.774	1045.164	395.237	5.555	174.835	6224.114
4.b.7	4.980	3	33.873	1086.317	402.253	5.938	175.304	6314.439
5.a.7	1.504	10	49.179	8248.746	555.039	8.737	177.658	6377.934
5.b.7	1.372	11	52.743	2321.457	502.959	9.433	178.842	6441.872
1.a.8	2.980	5	48.16132813	2780.21452	446.3452604	8.39771	174.3662463	6228.3623
1.b.8	2.533	6	50.33699415	2375.561295	442.5936159	9.13407	181.4583917	6507.0979
2.a.8								
2.b.8								
3.a.8	3.745	4	46.54357442	2358.843671	453.1617625	8.20301	176.243662	6355.3465
3.b.8	4.993	3	46.27860036	2114.156191	481.1953935	8.15631	176.243662	6276.0368
4.a.8								
4.b.8								
5.a.8	1.513	10	55.49952355	6563.005236	594.0952818	9.97831	179.7909128	6227.9572
5.b.8	1.376	11	55.4189005	5190.747745	577.6088058	9.97699	180.0286529	6232.592

## Vedlegg C:

### Materialdata for bjelke 9

Prøvestykker	Antall årringer	Maks spenning	E-modul	Densitet	Maks kraft	Tv.Sn.Areal	Volum	Lengde
		[N/mm <sup>2</sup> ]	[Mpa]	[kg/m <sup>3</sup> ]	[kN]	[mm <sup>2</sup> ]	[mm <sup>3</sup> ]	[mm]
1.a.9K								
1.a.9L								
1.b.9K	9	47.43	1428.40	449.494	8.392	176.950	2758.655	15.59
1.b.9L	9	50.51	1565.88	447.914	9.070	179.553	6429.805	35.81
2.a.9K	3	40.68	1227.91	368.527	7.112	174.835	2659.235	15.21
2.a.9L	3	36.93	3245.50	371.670	6.517	176.479	6349.716	35.98
2.b.9K	3	38.45	3293.64	368.527	6.723	174.835	2659.235	15.21
2.b.9L	3	41.20	2883.14	371.670	7.270	176.479	6349.716	35.98
3.a.9K	13	56.24	7778.51	528.745	9.978	177.422	2723.430	15.35
3.a.9L	13	55.13	6401.15	528.280	9.977	180.981	6511.703	35.98
3.b.9K	13	55.23	5591.61	504.962	9.748	176.479	2772.486	15.71
3.b.9L	13	56.16	2445.93	528.583	9.977	177.658	6356.615	35.78
4.a.9K	4	35.77	5174.46	423.022	6.321	176.715	2694.897	15.25
4.a.9L	4	52.55	2342.06	430.133	9.262	176.244	6323.623	35.88
4.b.9K								
4.b.9L								
5.a.9K	12	56.77	6482.79	598.06	9.98	175.77	2641.87	15.03
5.a.9L	12	55.93	4316.27	599.01	9.98	178.37	6410.54	35.94
5.b.9K	12	56.99	5619.46	563.16	9.98	175.07	2734.58	15.62
5.b.9L	12	56.00	2234.43	598.85	9.98	178.13	6378.88	35.81

### Tabellforklaring:

- K = Korte prøvestykker
- L = Lange prøvestykker