



Test Report, revision 1

Report No.: 262505-1-rev 1

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Page 1 of 1
Initials: JOSCFBAU/JLJ
Order no: 262505
No of appendices: 2

Item: Southern yellow pine (SYP) 180°C, red oak 170°C

Sampling: The test material was treated and then sampled by Danish Technological Institute on 17-06-2024.

Method: EN408 + A1:2012 (10) Timber structures – Structural timber and glued laminated timber – Determination of some physical and mechanical properties
Only bending properties were tested

Period: June 2024

Equipment: Load cell: 100 kN Instron, IDD 80578
Length transducer: ± 15 mm Instron, IDD 128519
Dimensions: Calliper 216568
Guage blocks: IID7944

Result:

Test	Nr of specimens	Average Fmax [N]	Average MOR [MPa]	Average MOE [MPa]
SYP 180°C	6	6635	60,5	12434
Red Oak 170°C	6	4734	43,5	11543

The material and methods are described in appendix 1, the results in appendix 2.

Revision: The values in the table on page 1 were corrected. This report replaces the report nr 262505-1 dated the 21-06-2024.

Storage: The test material will be destroyed after 1 month, unless otherwise agreed.

Terms: This test was conducted accredited in accordance with international requirements (ISO/IEC17025:2017) and in accordance with the General Terms and Conditions of Danish Technological Institute. The test results solely apply to the tested item. This test report may be quoted in extract only if Danish Technological Institute has granted its written consent.

Signature: This document is only valid with a digital signature from Danish Technological Institute. The date of issue appears from the digital signature.

Joanna Schalnat
Consultant




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5 July 2024



Materials & Methods

Materials & Methods

Material	:	Southern Yellow Pine, heat treated at 180°C
Identification No TI internal	:	14, 15, 18, 20, 23, 24
Thickness	:	Nominal 21 mm
Width and length	:	96 mm x 760 mm
Edges	:	Square
Image	:	
Number of panels	:	6

Material	:	Red oak, heat treated at 170°C
Identification No TI internal	:	60, 61, 66, 72, 73, 85
Thickness	:	Nominal 21 mm
Width and length	:	96 mm x 760 mm
Edges	:	Square
Image	:	
Number of panels	:	6

Materials & Methods

The displacement was measured as a global modulus on one side of the sample. EN408 section 10. The samples were cut to a length of 500mm. The samples were tested flatwise alternating with annual rings oriented downwards and upwards.

Distance between loads	150 mm
Span	425 mm



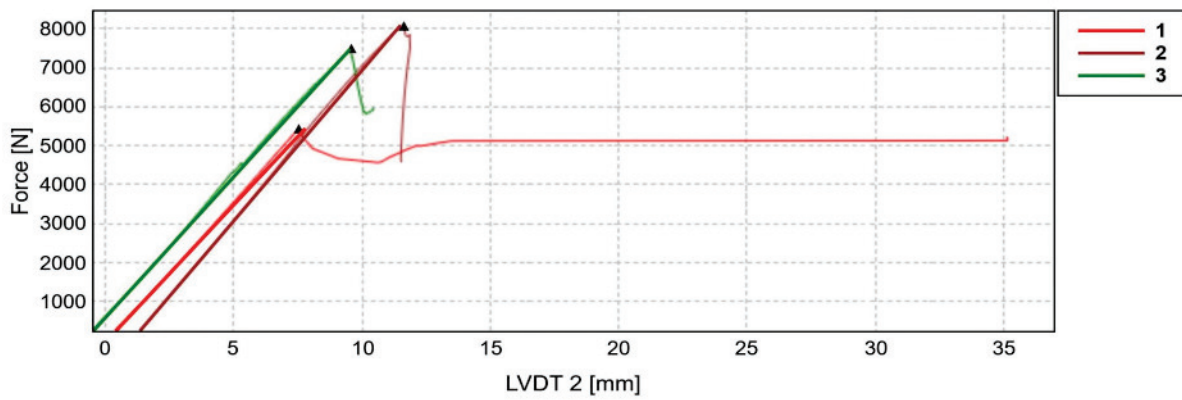
Results 4PB

Results 4PB

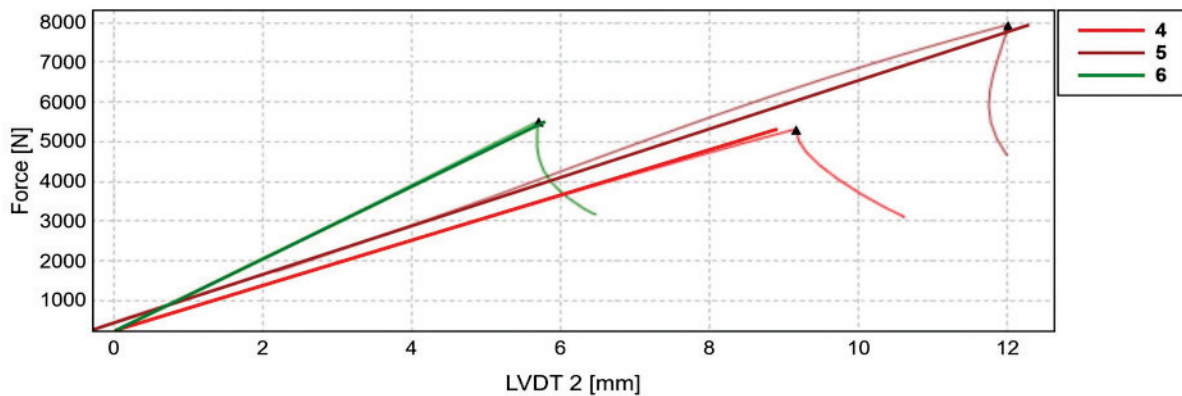
Southern Yellow Pine 180°C

	Specimen label	Thickness [mm]	Width [mm]	Fmax [N]	MOR [MPa]	MOE [MPa]	Time at Fmax [s]
1	SYP180C_14	21,6	96,5	5449	49,92	12277	120
2	SYP180C_15	21,7	96,4	8100	73,53	13277	199
3	SYP180C_18	21,8	96,6	7487	67,62	12334	178
4	SYP180C_20	21,7	97,1	5319	48,11	9790	159
5	SYP180C_23	21,6	97,1	7945	72,64	10654	211
6	SYP180C_24	21,4	96,6	5510	51,21	16272	98
Mean		21,6	96,7	6635	60,5	12434	161
Standard deviation		0,1	0,3	1341	12	2264	44

Specimen 1 to 3



Specimen 4 to 6

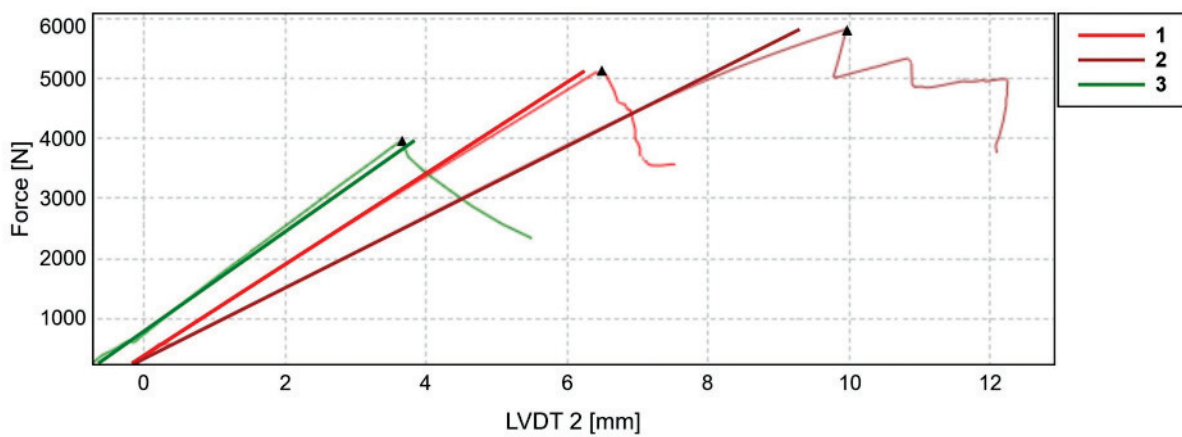


Results 4PB

Red oak, 170°C

	Specimen label	Thickness [mm]	Width [mm]	Fmax [N]	MOR [MPa]	MOE [MPa]	Time at Fmax [s]
1	RedOak170C_60	21,4	95,4	5126	48,24	13677	125
2	RedOak170C_61	21,6	97,6	5821	52,53	10105	175
3	RedOak170C_66	21,7	97,2	3968	35,73	14098	105
4	RedOak170C_72	21,0	96,6	3906	37,65	12140	80
5	RedOak170C_73	21,5	97,9	4491	40,81	8514	154
6	RedOak170C_85	21,6	97,6	5090	46,34	10723	149
Mean		21,5	97,1	4734	43,5	11543	131
Standard deviation		0,2	0,9	747	7	2161	35

Specimen 1 to 3



Specimen 4 to 6

