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UNIVERSIDADE DE COIMBRA

Test Report

Report nº: VBR 001/15 **Date:** 19-01-2015

Determination of dynamic stiffness - Transfer properties of resilient elements from laboratory measurements
(Test method: Internal procedure)

Requested by:

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Test specimen identification:

Test specimen*: High density cork with 75 mm nominal thickness
Reference*: ICB HD-1
Dimensions (mm): 301.2 X 300.9 X 74.6
Mass (g): 1343.66 **Date of production*:** 17-11-2014
Density (kg/m^3): 198.73

Test equipment:

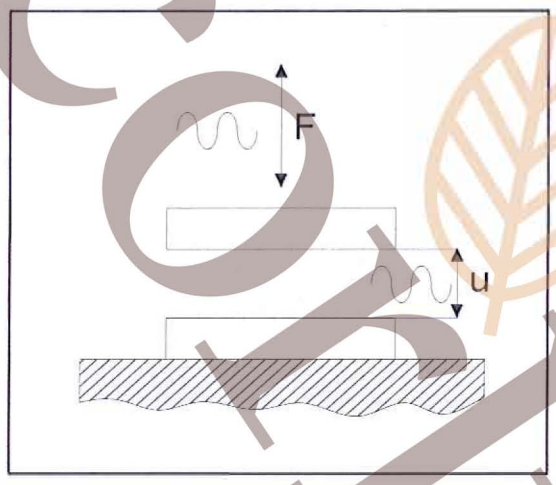
- Instron press 8803 (MF01)
- HBM MX840A datalogger 8 channel (DTL08)
- Dynamic Extensometer Instron (MFD01-01)

Test properties:

Our test specimen reference:	VBR047A/14	**Date of test:**	19-01-2015
Excitation signal:	Hidraulic Actuator (dynamic excitation)	**Temperature (ºC):**	18.4
Vibration measurement:	Displacement	**Relative Humidity (%):**	49.7

Preconditioning:

Excitation test squeme:



Test:

Steps	7
Frequency (Hz)	15
Measure cycles	150
Calculation cycles	20

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The results are valid exclusively for the tested specimens.
Data reported with * supplied by customer.

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RESULTS								
Mean load (kN)	Amplitude load (kN)	Mean deflection (mm)	Amplitude displacement (mm)	Dynamic Stiffness (N/mm)	Dynamic Stiffness (N/mm^3)	Dynamic modulus (N/mm^2)	Damping Coefficient (%)	Natural frequency (Hz)
18.888	1.822	3.059	0.048	37549.0	0.4143	30.91	7.45	22.23
22.640	2.197	3.354	0.059	37289.1	0.4114	30.69	7.45	20.23
26.421	2.569	3.626	0.069	37078.0	0.4091	30.52	5.80	18.67
30.173	2.949	3.910	0.080	36867.5	0.4068	30.35	7.45	17.42
33.974	3.321	4.215	0.090	36680.7	0.4047	30.19	4.96	16.38
37.731	3.698	4.547	0.102	36362.9	0.4012	29.93	7.03	15.48
41.492	4.078	4.912	0.113	36021.8	0.3975	29.65	6.62	14.69
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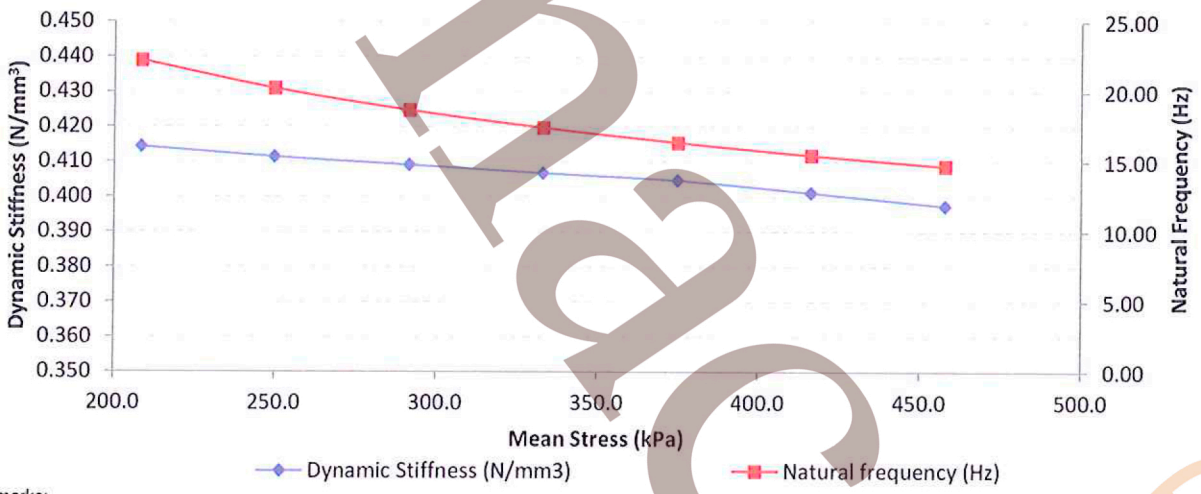
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-



Remarks:

Operator(s): Filipe Pedro **Report author(s):** Filipe Pedro

Technical responsibility

António Tadeu

António Tadeu

(Technical and Scientific Supervisor)

Administration

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