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- Management -
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3. Ausfertigung



UNION INTERNATIONALE D' EXPERTS
INTERN ASSOCIATION OF EXPERT

UNION INTERNATIONALE DE PERITOS
INTERNATIONALE EXPERTEN UNION

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Preliminary remarks

By telephone and in writing, the applicant – OSBE Parkett, NL-5628 CJ Eindhoven – requested the expert and lecturer Siegfried Heuer / Institut für Fußbodenbau to test the Elastilon product designated "tilo-elasto-fix/Elastilon-Lock" with regard to the characteristic features specific to the material, particularly with regard to the resistance to alternating climate, and to set out the results of these tests in the following

Test Report

No. OS-725-2005

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A quality certificate will be issued later for all the test results to which reference is made here.

The aforementioned tests for determining the resistance to alternating climate were undertaken in cooperation with the test laboratory eph Entwicklungs- und Prüflabor Holztechnologie GmbH, Dresden, and iff-Prüfinstitut Bau- und Fussbodentechnik, Koblenz.

The following samples / constructions were provided by the applicant for the tests:

- Multi-layer strip flooring, coated, size 900 x 90 x 10 mm
- "tilo-elasto-fix/Elastilon-Lock" product / system

1.0 Tests and test results

1.1 Determination of dimensional changes in laid flooring when exposed to alternating climate

The dimensional changes in flooring laid without bonding to the substrate as a result of exposure to alternating climate were determined in a climate chamber in accordance with ISO-CD 24339.

The different flooring versions were laid in a rack system.

The floor construction described below was produced on a standard shelf:

- ❖ Production of an OSB panel (22 mm thick) sealed against moisture at the ends on a shelf (base area approx. 2 m x 3 m) as solid substrate on which the parquetry was subsequently laid.
- ❖ Multi-layer strip flooring bonded to the OSB panel with the aid of the Elastilon product "tilo-elastofix/Elastilon-Lock". As directed in the laying instructions, transverse joints were bonded while longitudinal joints were assembled without bonding.

The following climate was produced:

- ❖ 1 week in a normal climate with 50% relative humidity and a temperature of 23 °C
- ❖ 2 weeks in a moist climate with 85% relative humidity and a temperature of 23 °C
- ❖ 6 weeks in a dry climate with 30% relative humidity and a temperature of 23 °C

The following parameters were assayed every week:

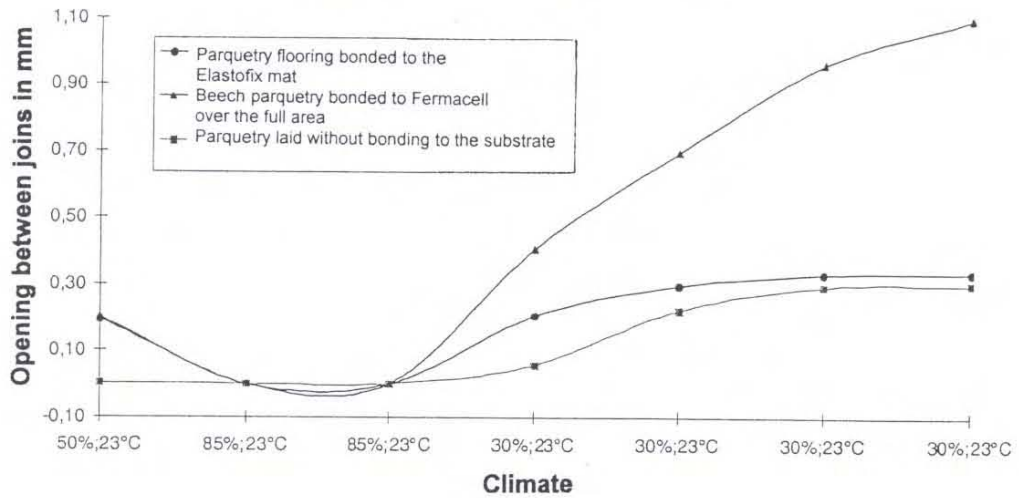
- ❖ Levelness over the width of the panel
- ❖ Difference in height between elements in accordance with EN 13 329,
- ❖ Opening of the joints between elements in accordance with EN 13 329.

Results

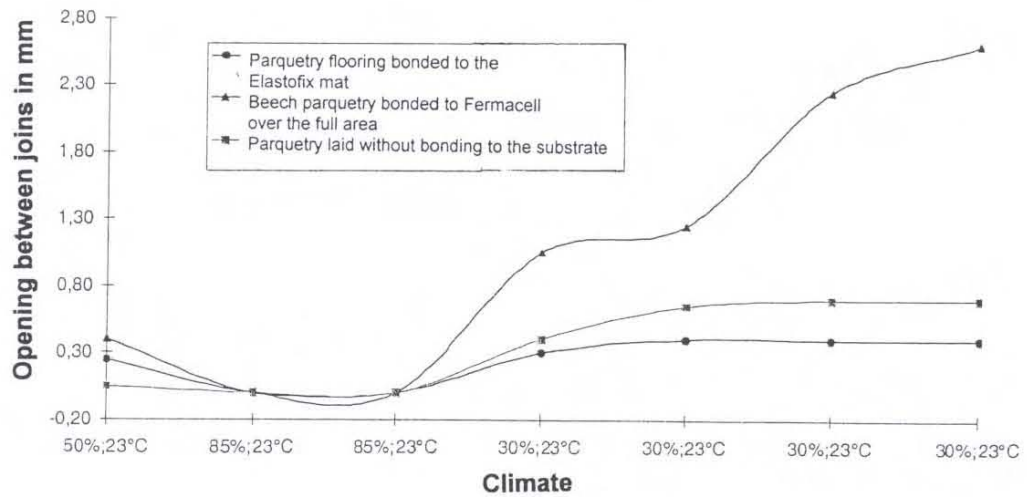
(Graphic illustration of the opening between joints, protrusion of joints and levelness over the panel width)

In order to assess the quality of the tested flooring construction, these results are subsequently compared with those obtained for a beech parquet material bonded to Fermacell over the full area and for parquet material laid without bonding to the substrate. This comparison is then included in the overall assessment.

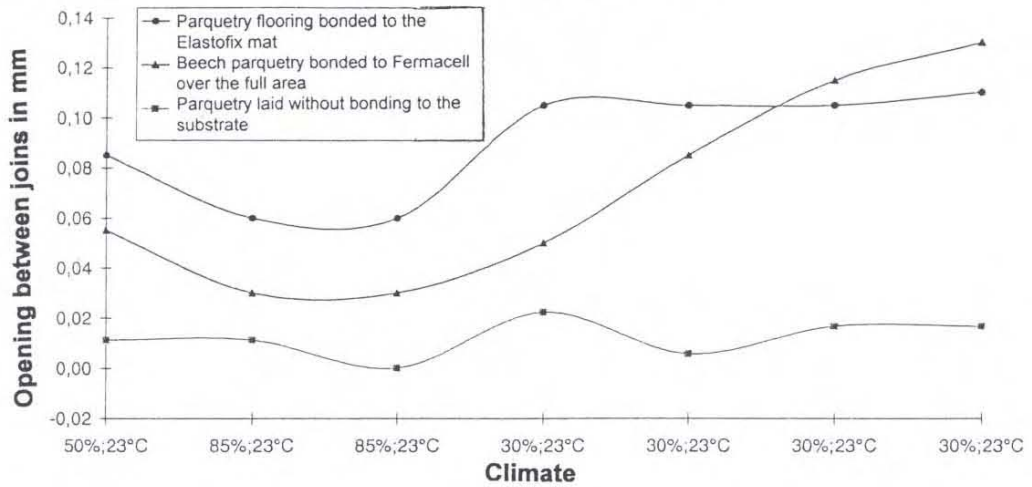
Mean opening in longitudinal joints



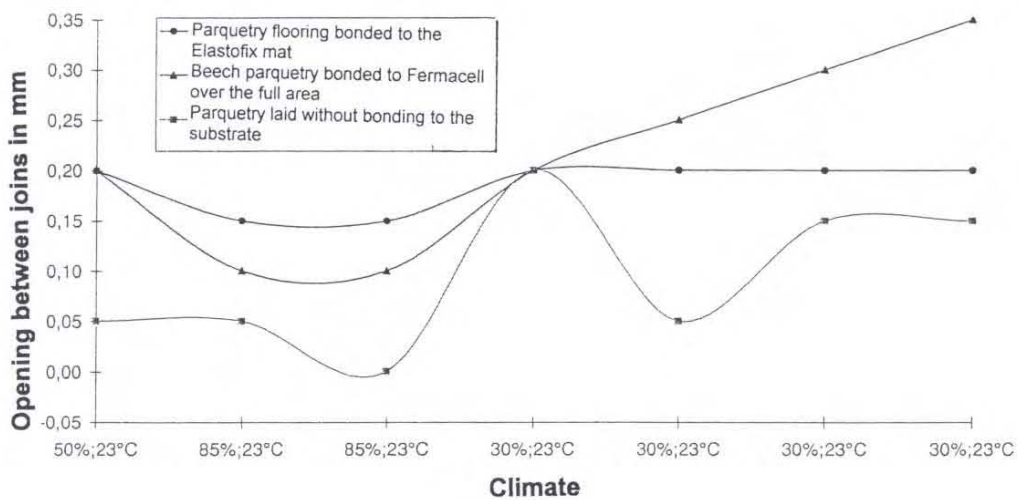
Maximum opening in longitudinal joints



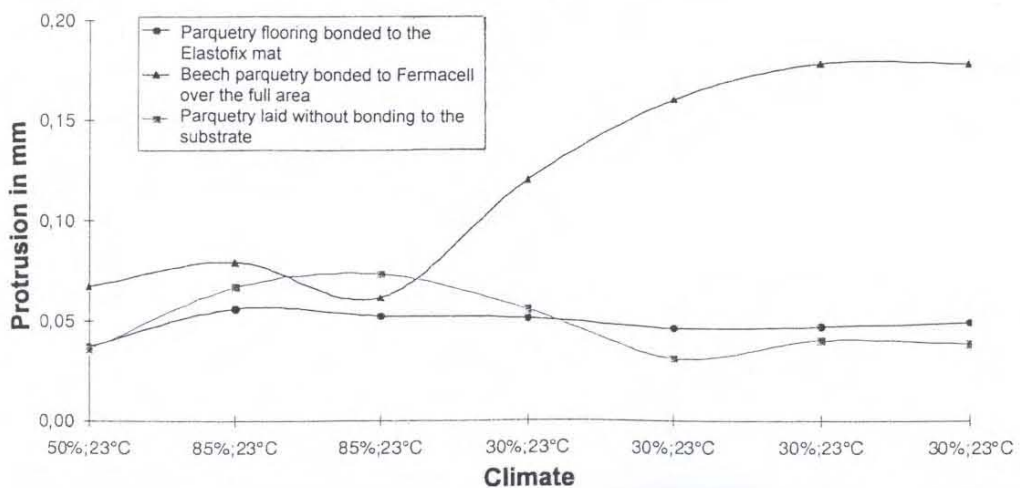
Mean opening in transverse joints



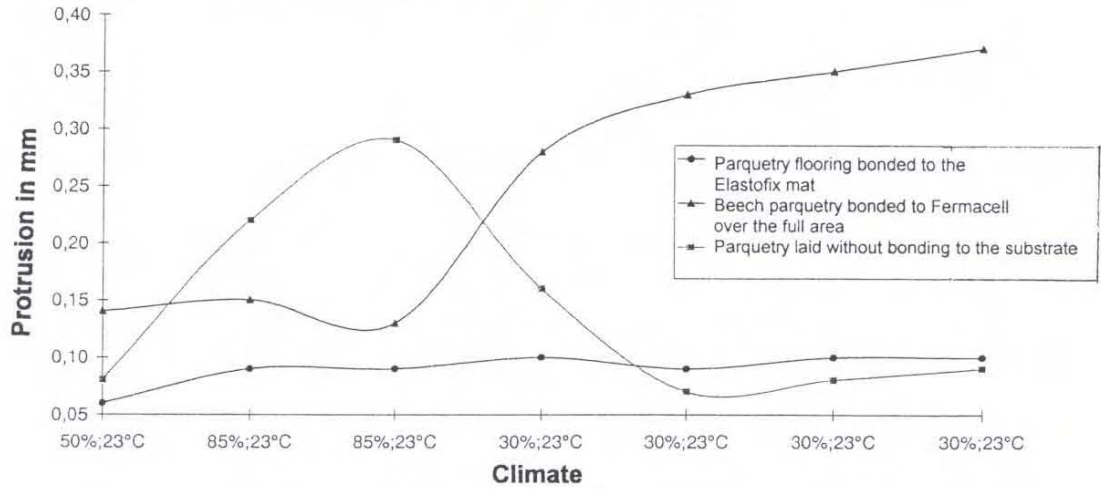
Maximum opening in transverse joints



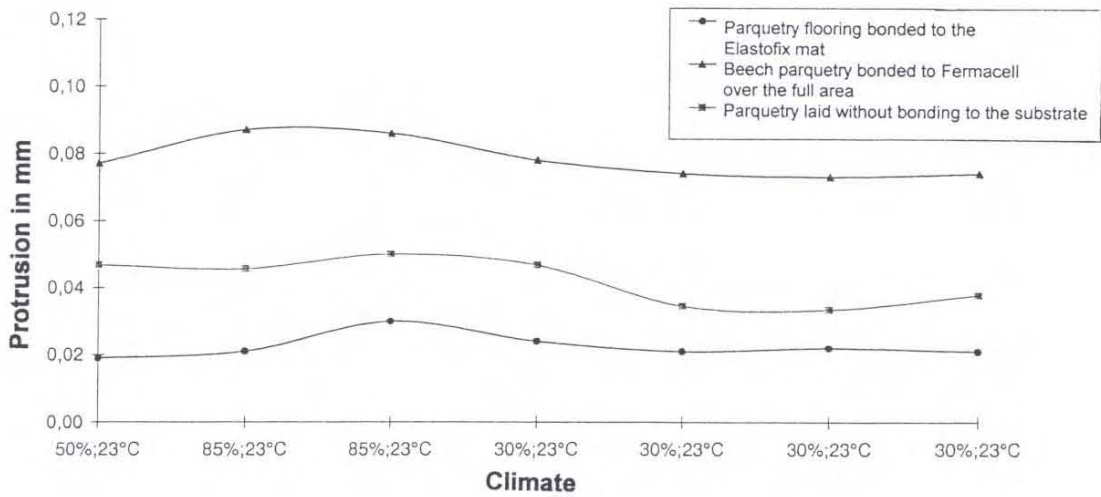
Mean protrusion of longitudinal joints



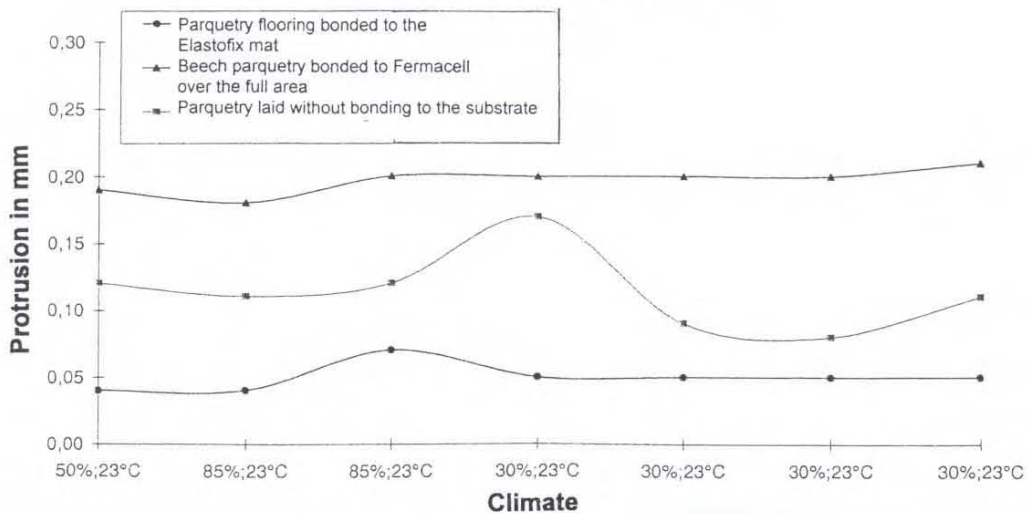
Maximum protrusion of longitudinal joints



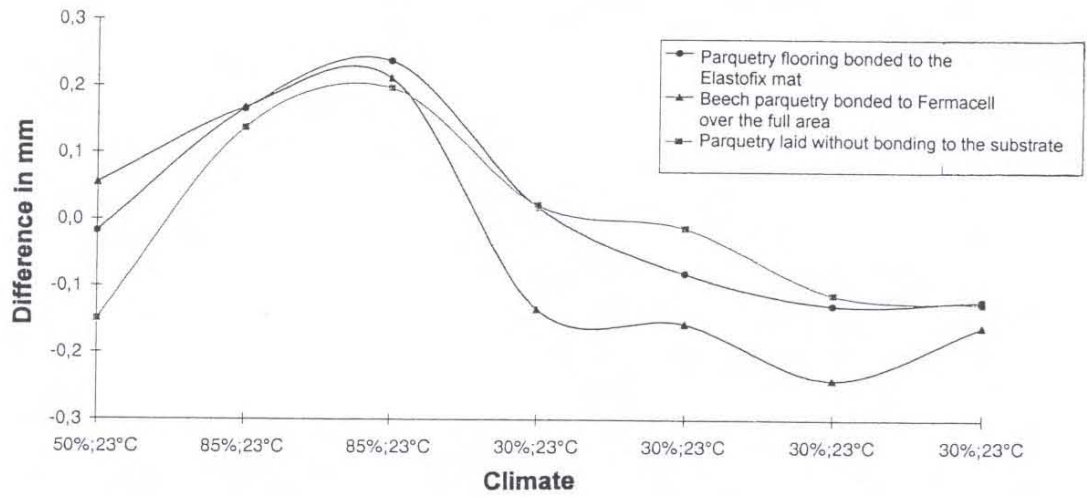
Mean protrusion of transverse joints



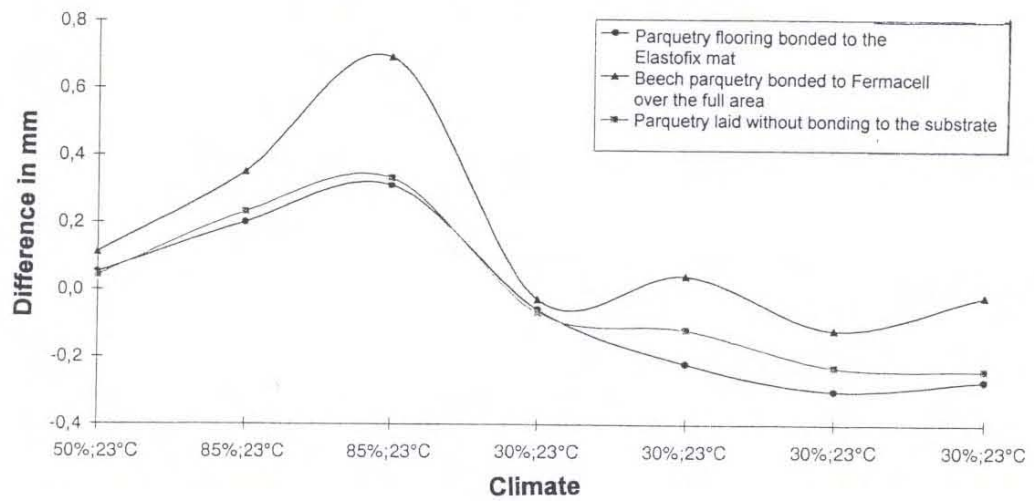
Maximum protrusion of transverse joints



Mean levelness over the panel width



Maximum levelness over the panel width



Overall assessment

Requirements for assessing the resistance of bonded parquetry surfaces to alternating climate do not exist.

For this reason, the results obtained with the floor construction under test were compared with those of two characteristic parquet floor constructions (one bonded over the full area, the other laid without bonding to the substrate):

Test parameter (Difference between moist and dry climate)	Results obtained for the respective floorings:		
	Parquetry with Elastilon product, type "tilo-elastofix/Elastilon-Lock"	Parquetry bonded over the full area	Parquetry laid without bonding to the substrate
Opening in long. joins (mean value) in mm (maximum) in mm	0.34 0.40	1.10 2.60	0.30 0.70
Opening in transv. joins (mean value) in mm (maximum) in mm	0.05 0.05	0.10 0.25	0.02 0.20
Protrusion of long. joins (mean value) in mm (maximum) in mm	0.01 0.04	0.12 0.24	0.10 0.22
Protrusion of trans.joins (mean value) in mm (maximum) in mm	0.01 0.02	0.02 0.03	0.02 0.09
Levelness, panel width (mean value) in mm (maximum) in mm	0.36 0.61	0.45 0.81	0.33 0.57

Qualitative classification of results following exposure to an alternating climate for the flooring with "tilo-elastofix/Elastilon-Lock" product as compared with other parquet flooring systems (bonded over the full area, laid without bonding to the substrate).

Test parameter	Assessment in comparison with parquet flooring constructions (bonded over the full area, laid without bonding to the substrate)
Opening in long. joins	
Mean value	+
Maximum	+
Opening in transv. joins	
Mean value	0
Maximum	+
Protrusion of long. joins	
Mean value	+
Maximum	+
Protrusion of transv. joins	
Mean value	0
Maximum	+
Levelness over panel width	
Mean value	0
Maximum	0

+ = good (above average)
 0 = medium (average)
 - = poor (below average)

Comparison of the dimensional changes in the tested / investigated flooring construction with multi-layer strip flooring bonded with "tilo-elastofix/Elastilon-Lock", on the one hand, and parquet constructions bonded over the full area or laid without bonding to the substrate, on the other, re-



vealed equivalent and in some cases better / more advantageous values when exposed to alternating climate, particularly with regard to the longitudinal joints.

iff-Prüfinstitut Bau- und Fussbodentechnik

The expert

Siegfried Heuer

