SLOVENSKI STANDARD
SIST-TS CEN/TS 13810-2:2004

01-januar-2004

Lesne ploģ e - Plavajoļ i podi - 2. del: Preskusne metode

Wood-based panels - Floating floors - Part 2: Test methods

Holzwerkstoffe - Schwimmend verlegte Fußböden - Teil 2: Prüfverfahren

Panneaux a base de bois - Planchers flottants - Partie 2 : Méthodes d'essai

Ta slovenski standard je istoveten z: **CEN/TS 13810-2:2003**

ICS:

79.060.01	Lesne ploģ e na sploģno	Wood-based panels in general

SIST-TS CEN/TS 13810-2:2004 **en**

TECHNICAL SPECIFICATION
SPÉCIFICATION TECHNIQUE
TECHNISCHE SPEZIFIKATION

CEN/TS 13810-2

April 2003

ICS 79.060.01

English version

Wood-based panels – Floating floors – Part 2: Test methods

Panneaux à base de bois — Planchers flottants — Partie 2 : Méthodes d'essai

Holzwerkstoffe — Schwimmend verlegte Fußböden — Teil 2: Prüfverfahren

This Technical Specification (CEN/TS 13810-2) was approved by CEN on 11 November 2002 for provisional application.

The period of validity of this CEN/TS is limited initially to three years. After two years the members of CEN will be requested to submit their comments, particularly on the question whether the CEN/TS can be converted into a European Standard.

CEN members are required to announce the existence of this CEN/TS in the same way as for an EN and to make the CEN/TS available. It is permissible to keep conflicting national standards in force (in parallel to the CEN/TS) until the final decision about the possible conversion of the CEN/TS into an EN is reached.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Slovakia, Spain, Sweden, Switzerland and United Kingdom.

EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

Management Centre: rue de Stassart, 36 B-1050 Brussels

Ref. No. CEN/TS 13810-2:2003 E

Contents

page

Foreword

This document (CEN/TS 13810-2:2003) has been prepared by Technical Committee CEN/TC 112 “Wood-based panels”, the secretariat of which is held by DIN.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to announce this Technical Specification: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Slovakia, Spain, Sweden, Switzerland and the United Kingdom.

Annex A is normative.

1 Scope

This Technical Specification specifies test methods for loading a continuously fully supported non-structural floating floor with static concentrated point loads, alternating loads and dynamic impact loads for determining the values of the resulting deflections.

NOTE These test methods form part of the basis for classification of floating floor constructions. The requirements, i.e. load values, number of load cycles, and deflection limits for the different load categories, are given in EN 13810-1.

2 Normative references

This Technical Specification incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text, and the publications are listed hereafter. For dated references, subsequent amendments to or revisions or any of these publications apply to this Technical Specification only when incorporated in it by amendment or revision. For undated references, the latest edition of the publication referred to applies (including amendments).

EN 310, *Wood-based panels — Determination of modulus of elasticity in bending and of bending strength.*

EN 319, *Particleboards and fibreboards — Determination of tensile strength perpendicular to the plane of the board.*

EN 322, *Wood-based panels — Determination of moisture content.*

EN 323, *Wood-based panels — Determination of density.*

EN 326-1, *Wood-based panels — Sampling, cutting and inspection — Part 1: Sampling and cutting of test pieces and expression of test results.*

EN 826, *Thermal insulating products for building applications — Determination of compression behaviour.*

EN 1195, *Timber structures — Test methods — Performance of structural floor decking.*

EN 1602, *Thermal insulating products for building applications — Determination of the apparent density.*

EN 1991-1-1, *Eurocode 1: Actions on structures — Part 1-1: General actions — Densities, self-weight, imposed loads for buildings.*

EN 13810-1, *Wood-based panels — Floating floors — Performance specifications and requirements.*

3 Terms and definitions

For the purposes of this Technical Specification the following terms and definitions apply.

3.1
static loading
loading situation is deemed to be static when the load is constant over at least a period of 1 h

3.2
alternating load
loading situation is deemed to alternate where its magnitude varies in a cyclic manner with time

3.3
T-joint
joint between three floor panels

3.4
I-joint
joint between two floor panels

4 Symbols and subscripts

4.1 Symbols

x single value for deflection of the concentrated load

y single value for deflection of impact

$\bar{x}$ mean value for deflection of the concentrated load

n highest number of alternating measurement point

4.2 Subscripts

1 to 8 measurement point for concentrated point load

9 to14 measurement point for alternating load

c result of concentrated point load

a result of alternating load

im result of impact load

i measurement number

ref reference

5 Principle

A test floor is subject step wise to a series of loadings each step, representing increasing load classes in EN 1991-1-1 (Eurocode 1). For each load the deflections are measured, and the test floor is checked for visible damage. The performance of the floating floor system is quantified as the highest load category to which the test floor can be subjected without visible damage of the panel or the joints, and without the deflection limits being exceed.

6 Sampling

Panels used for both the test floor and the dummy unit shall be sampled from production over a period of at least three productions.

The number of test panels required are related to the dimensions of the panels and the measurement required. See figure 1 and 8.2.

7 Test set-up and apparatus

7.1 Test set-up for concentrated point load and alternating load

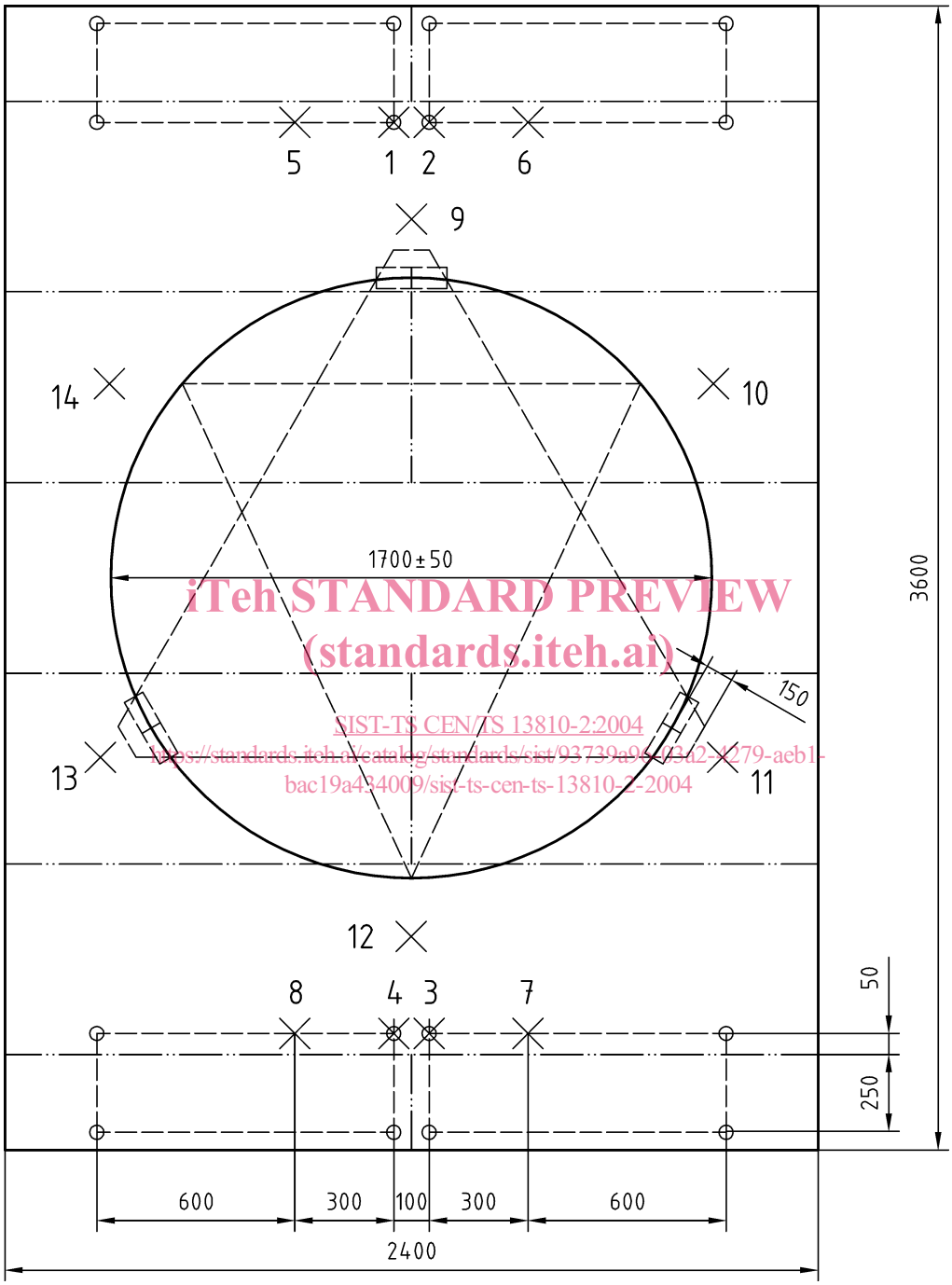
The construction of the test floor shall be representative of that occurring in service.

The principle test set-up is shown in figure 1.

If the flooring consists of floor panels of 600 mm width, the joint layout and the location of the concentrated point load and alternating load shall be as shown in figure 1.

If the flooring consists of floor panels of 800 mm, 900 mm, 1 000 mm or 1 200 mm width, the joint layout and the location of the concentrated point load and alternating load shall be as shown in the figures given in annex A.

Dimensions in millimetres



Key

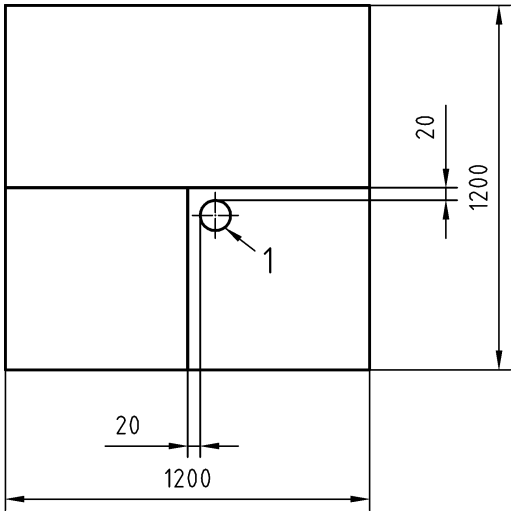
- Panel joint
- Course of wheel
- Load equipment unit
- Location of point load
- Measuring point

Figure 1 — Test floor, and location of load equipment and measuring points — Panel width 600 mm

7.2 Test set-up for impact load

The impact testing can be carried out on the actual floor set-ups at least at two T-joints, if this has not been damaged. Alternatively, two separate test set-ups shall be prepared with a minimum dimension of 1 200 mm × 1 200 mm. Each of the test set-ups shall contain a T-joint, see figure 2.

Dimensions in millimetres



Key
1 Point of impact

Figure 2 — Test set-up for impact load according to EN 1195

7.3 Apparatus

7.3.1 Concentrated point load

Concentrated point load shall be applied at the 16 positions (†) given in figure 1 or in annex A.

The concentrated point load shall be applied through a flat steel surface with a diameter of (25 ± 0,1) mm and with the edge of the contact surface rounded with a radius of 2 mm.

NOTE The load is transferred to the test floor by means of a steel bar.

Four point loads at the corners of a 300 mm × 900 mm rectangle constitute one “rack”, and two racks are arranged at each end of the floor, shown as rectangles in figure 1 or annex A. The distance from the rack to the end of the floor shall be 50 mm.

7.3.2 Alternating load

The equipment for alternating load is a carousel, consisting of a plate (frame) with three wheels, and a motor driven vertical driving shaft at the centre.

The three wheels shall be located at the comers of an equilateral triangle, and the diameter of the path of the middle of the wheels shall be (1 700 ± 50) mm. The tyre of the wheels shall be made of solid rubber with a hardness of 65 to 70 Shore A, and their diameter shall be (200 ± 25) mm. The width of the wheels shall be (35 ± 5) mm. The total load of the carousel shall be evenly distributed over three wheels. The accuracy of the load shall be ± 5 %. The speed of rotation of the carousel shall be (10 ± 0,5) min^{-1}.

NOTE The speed of rotation corresponds to 30 load cycles per minute or a load frequency of 0,5 Hz.