



National Standards Authority of Ireland
Údarás um Chaighdeáin Náisiúnta na hÉireann

IRISH STANDARD

S.R. CEN/TS 15680:2007

ICS 91.060.30

National Standards
Authority of Ireland
Glasnevin, Dublin 9
Ireland

Tel: +353 1 807 3800
Fax: +353 1 807 3838
<http://www.nsai.ie>

Sales

<http://www.standards.ie>

*This Irish Standard was
published under the authority
of the National Standards
Authority of Ireland and
comes into effect on:
4 February 2008*

**PREFABRICATED TIMBER STAIRS -
MECHANICAL TEST METHODS**

**NO COPYING WITHOUT NSAI
PERMISSION EXCEPT AS
PERMITTED BY COPYRIGHT
LAW**

© NSAI 2007

Price Code J

Údarás um Chaighdeáin Náisiúnta na hÉireann

This page is intentionally left BLANK.

ICS 91.060.30

English Version

Prefabricated timber stairs - Mechanical test methods

Escaliers préfabriqués en bois - Méthodes d'essai
mécaniques

Vorgefertigte Holztreppen - Mechanische Prüfverfahren

This Technical Specification (CEN/TS) was approved by CEN on 24 September 2007 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 promptly at national level in an appropriate form. 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, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, 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

Contents	Page
Foreword.....	5
Introduction	6
1 Scope	6
2 Normative references	6
3 Terms and definitions	7
4 Determination of mechanical strength of balusters under static load on prefabricated railing system : handrails or balustrades	7
4.1 General.....	7
4.2 Principle.....	7
4.3 Equipment	7
4.4 Conditioning.....	9
4.5 Sampling.....	9
4.6 Procedure	9
4.7 Results	10
5 Determination of mechanical strength under distributed static load of prefabricated systems : handrails or balustrades	10
5.1 General.....	10
5.2 Principle.....	10
5.3 Equipment	10
5.3.1 Support structure.....	10
5.3.2 Distributed load application system.....	10
5.4 Conditioning.....	11
5.5 Sampling.....	11
5.6 Procedure	11
5.7 Calculated value.....	11
5.8 Test results	12
6 Determination of mechanical strength under dynamic loads of prefabricated systems : handrails or balustrades	12
6.1 General.....	12
6.2 Principle.....	12
6.3 Equipment	12
6.3.1 Support structure.....	12
6.3.2 Hanging impact body system.....	12
6.3.3 Survey system.....	13
6.4 Conditioning.....	13
6.5 Sampling.....	13
6.6 Procedure	13
6.7 Results	14
7 Determination of mechanical strength under vertical static load on handrails	14
7.1 General.....	14
7.2 Principle.....	14
7.3 Equipment	14
7.4 Conditioning.....	14
7.5 Sampling.....	15
7.6 Procedure	15
7.7 Results	15

8	Determination of mechanical strength under concentrated static loads on panels of prefabricated systems: handrails or balustrades	15
8.1	General	15
8.2	Principle.....	16
8.3	Equipment	16
8.3.1	Support structure	16
8.3.2	Virtually rigid anchorage system.....	16
8.3.3	Loading application and measurement system	16
8.3.4	Survey system	16
8.4	Conditioning	16
8.5	Sampling.....	16
8.6	Procedure.....	16
8.7	Results.....	17
9	Determination of load bearing capacity for flights of stairs	17
9.1	General	17
9.2	Principle.....	17
9.3	Equipment	18
9.3.1	Support structure	18
9.3.2	Distributed load application system.....	18
9.4	Conditioning	18
9.5	Sampling.....	18
9.6	Procedure	18
9.7	Characteristic value	18
9.8	Results.....	19
10	Determination of flight deflection under distributed static load	19
10.1	General	19
10.2	Principle.....	19
10.3	Equipment	19
10.3.1	Support structure	19
10.3.2	Load application system.....	19
10.3.3	Survey system	19
10.4	Conditioning	19
10.5	Sampling.....	19
10.6	Procedure.....	20
10.7	Results.....	20
11	Determination of mechanical strength under dynamic loads on steps included in flights or on flights of stairs in prefabricated stairs	20
11.1	General	20
11.2	Principle.....	20
11.3	Equipment	20
11.3.1	Support structure	20
11.3.2	Hanging impact body system	21
11.3.3	Survey system	21
11.4	Conditioning	21
11.5	Sampling.....	21
11.6	Procedure.....	21
11.7	Results.....	21
12	Determination of bending strength of steps of prefabricated stairs	21
12.1	General	21
12.2	Principle.....	22
12.3	Equipment	22
12.3.1	Support structure	22
12.3.2	Load application and measurement system.....	22
12.3.3	Survey system	22
12.4	Conditioning	22
12.5	Sampling.....	22
12.6	Procedure.....	22

12.7	Characteristic value	23
12.8	Results	23
13	Determination of step deflection under vertical static load	23
13.1	General	23
13.2	Principle	23
13.3	Equipment	23
13.3.1	Support structure	23
13.3.2	Load application and measurement system	23
13.3.3	Survey system	24
13.4	Conditioning	24
13.5	Sampling	24
13.6	Procedure	24
13.7	Results	24
14	Test laboratory	24
Annex A	(informative) Examples of calculation on ultimate limit states	25
A.1	Test until failure	25
A.1.1	Examples with 3 series	25
A.1.2	Example with 10 series	26
A.2	Test without failure	28
A.2.1	Example with 3 series	28
A.2.2	Example with 10 series	28
	Bibliography	29

This is a free preview. Purchase the entire publication at the link below:

[Product Page](#)

-
- [Looking for additional Standards? Visit Intertek Inform Infostore](#)
 - [Learn about LexConnect, All Jurisdictions, Standards referenced in Australian legislation](#)
-