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Collection of rationales for EN 1176 - Requirements

Recueil d'exposés des motifs concernant l'EN 1176 - Exigences

Sammlung von grundsätzlichen Überlegungen zur EN 1176 - Anforderungen

This Technical Report was approved by CEN on 9 January 2023. It has been drawn up by the Technical Committee CEN/TC 136.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
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European foreword

This document (CEN/TR 16598:2023) has been prepared by Technical Committee CEN/TC 136 “Sports, playground and other recreational facilities and equipment”, the secretariat of which is held by DIN.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document supersedes CEN/TR 16598:2014.

In comparison with the previous edition, the following technical modifications have been made:

— Clause 4 – Content has been updated to reflect the changes listed in EN 1176-1:2017 European Foreword

— Clause 5 - Content has been updated to reflect the changes listed in EN 1176-2:2017 European Foreword

— Clause 6 - Content has been updated to reflect the changes listed in EN 1176-3:2017 European Foreword

— Clause 7 - Content has been updated to reflect the changes listed in EN 1176-4:2017 European Foreword

— Clause 9 - Content has been updated to reflect the changes listed in EN 1176-6:2019 European Foreword

— Informative Annex A “Template for comments/requests regarding the rationales for specific clauses of the EN 1176 series” added

— Informative Annex B “Tools for better understanding Stage 2 and 4” added.

This document is intended to be read in conjunction with EN 1176 (all parts).

Any feedback and questions on this document should be directed to the users’ national standards body. A complete listing of these bodies can be found on the CEN website.

Introduction

To better control the development of EN 1176, CEN TC 136 SC1 has produced a template for the submission of comments or requests for change to the standard. An example of the template can be found in Annex A.

The intention of the safety standard for playground equipment was to avoid situations in which a child, due to his age or ability or stage of development, is unable to foresee and comprehend a risk.

It was the intention to control traps and risks from which severe harm could occur for the user.

In consideration of this, the task group chose the form of a report in which the objective mentions repeatedly that the aim of the standard is always to protect the child from harm.

It has become apparent that users of the standard have sometimes lost sight of this and were just considering dimensions, functionality or spaces and special equipment parts without regard for the safety aim.

When considering the complexity of equipment and the efforts to provide safety, these efforts should be proportionate to the incidents that take place in real life.

Dimensions should not be taken as absolute because juristic and safety treatments are different in relation to the risk of a deviation from the standard.

A large number of the objectives for the rationales are repeated. This is intentional as it reinforces the safety aim of the standard and prevents the misunderstanding of a rationale when taken in isolation.

Working on the rationales for the single paragraphs, it became obvious for the task group that there where parts in the standard which had been discussed very often and deeply (e.g. the damping qualities of surfaces, HIC) and there were other parts that had no or very little discussions (e.g. hard edges at the end of a falling space).

Noticing this it was nearly self-evident to have an assessment / evaluation proposal for all requirements:

a) fundamental safety issues:

   1) safety installations / regulations have to prevent situations that may cause the death of a user;

   2) safety installations / regulations have to prevent situations that may lead to a loss of extremities of a user;

   3) safety installations / regulations have to prevent situations that may cause a lifetime disability (e.g. blindness, paraplegia);

   4) safety installations / regulations have to prevent situations in which a user is not able to free himself out of a trap;

b) basic safety issues:

   1) safety installations / regulations should prevent situations which overburden the user according to his age and prevent accidents like bone fractures, bruises, abrasions;

c) standard issues:

   1) man-made playground equipment is necessary because urban environments may not offer natural play facilities. Therefore, this kind of equipment is meant to advance the development of the child.

As there are very different development levels during childhood it means that the equipment has to be engineered in such a tricky way that it supports the several stages of development and screens the different age groups.

At least it should be mentioned that the requirements of the standard are just a concern about the effect of an equipment on the user. They do not consider the necessity and the social impact of a playground e.g. in areas where children have no natural resources with which they could play.

The standard cannot account for the behaviour of children. The ideal is that children should use the play environment as a means of personal development. However, it is accepted that the behaviour of children cannot be controlled by a technical standard. The best way to deal with this is to adopt a Risk Assessment process, which will allow the behaviour of children to be considered as part of the inspection of the play environment.

The Risk Assessment has to take into account the competence and ability of the potential users of the equipment and the foreseeable risks to those users. It is possible to allow greater challenge and opportunity in play equipment by controlling access to equipment, the control of access has to take in to account the abilities and skills of the user. The standard lists some ways in which access can be controlled.

It is not possible to control the way in which parents or carers may influence the use of play equipment, in particular if they allow, encourage or assist children to overcome controls on access imposed by the designer.

This technical report does not review the annexes of the different parts of the standard EN 1176.

There is no overlap with EN 71-8.

In order to create a common consciousness of the standard the task group rationales recommend considering the following SC1 statement:

‘A strong principle of EN 1176 is to accept that some risks offer a strong benefit to users in their development. These are usually those that are apparent/foreseeable and offer excitement and challenge to the provision’.

1 Scope

The rationales given in this document describe the main reasons behind the requirements given in EN 1176. The requirements in the document are the tools (e.g. measures, testing methods etc.) by which the objectives are intended to be reached.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 1176 (all parts), *Playground equipment and surfacing*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at http://www.electropedia.org/
- ISO Online browsing platform: available at http://www.iso.org/obp

3.1
objective
intention of the clause in the standard

3.2
risk
possible outcome for the user if the objective is not achieved

3.3
rationale
reason for making this specific requirement

Note 1 to entry: Rationales may be given in the notes given in the requirements. This is mentioned in the document.

3.4
addendum
additional comments and remarks

4 Part 1

4.1 Paragraph in standard: 4.1.2 Flammability

Objective: avoid burning, particularly from those materials which produce flaming droplets of molten material which are difficult to extinguish.

Risk: in the event of a flash fire there is insufficient time to intervene and protect the user. The outcome of a fire may be death or disfigurement.

Rationale: the correct selection of materials to ideally prevent this occurring or allow escape from the equipment.