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Playground and recreational areas - requirements for quality of inspections and competence of inspectors

Spielplatz- und Freizeitbereiche - Anforderungen an Qualität von Prüfungen und Kompetenz von Prüfern

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**Playground and recreational areas - requirements for
quality of inspections and competence of inspectors**

Spielplatz- und Feizeitbereiche - Anforderungen an
Qualität von Prüfungen und Kompetenz von Prüfern

This draft Technical Report is submitted to CEN members for Vote. It has been drawn up by the Technical Committee CEN/TC 136.

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Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

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COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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FprCEN/TR 17207:2017 (E)

European foreword

This document (FprCEN/TR 00136408:2017) 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.

This document is currently submitted to the Formal Vote.

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Introduction

During the process of reviewing the EN 1176 standard it became clear to the CEN/TC 136/SC 1 committee that there is a broad spectrum of competence in inspectors of playground environments. With the specific elements involved in play, such as equipment, environment, children, etc., an inspection of a playground environment is not solely a “technical” inspection but also requires knowledge of how and why children of all abilities play from the inspector. Inspectors need to understand the way children play, interact, evolve and develop to be able to make informed, balanced decisions about the safety of the play environment.

EN 1176-1 states: *“Risk taking is an essential feature of play provision and of all environments in which children legitimately spend time playing. Play provision should aim to offer children the chance to encounter acceptable risks as a part of a stimulating, challenging and controlled learning environment. Play provision should aim at managing the balance between the need to offer risk and the need to keep children safe from serious harm.”* The aim should be to provide as much play value as possible and as little safety as necessary.

In this vision on the safety of playground environments it is essential that the inspector doesn't only know the technical content of the related standards, but also understands why and how to make risk assessments and/or a risk benefit analysis.

After reviewing methods of inspections around the Europe, it seems there are three main principal ways in use:

- 1) Inspection of the entire play environment is including conformity of equipment and the extent of the impact attenuating surfacing area, maintenance defects, ancillary items and be combined with a risk assessment.
- 2) Checking the equipment and environment based on a risk assessment alone. This can be described as a global inspection of the minimal level of safety of the equipment and play environment.
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- 3) Checking the equipment referencing the relevant standards and technical reports. Broadly this can be described as a ‘conformity inspection’. This option specifically excludes the play environment because there is no standard available for it.

The recommended approach is the first, which is broadly applicable in Europe; it is acknowledged by authors of this European Technical report that cultural differences play an important role in the inspection process and outcome. Each member state should publish this Technical Report, the implementation of the guidance is determined at a National level.

Regardless to popularity of method three, checking the equipment without identifying hazards, undertaking risk assessment and/or risk-benefit analysis, is a very restrictive inspection. The outcome of this option can be in contradiction with the statement about risk taking in the introduction of EN 1176-1.

The way in which children play and the public perception of children's play varies from country to country and with this in mind it is vital that the inspector is aware of the cultural differences that exist. The inspector will need to be familiar with what is an acceptable level of risk or challenge for the country in which they are employed or contracted.

For example, there is a big difference in the approach on the subject of water in the direct neighbourhood of play environment in the Netherlands compared to other countries in the EU. This is a result of the never ending struggle in The Netherlands to acquire more space to live. And so building “on” or in the close proximity of water is a necessity. Children are educated from early age on how to deal with this potential danger in their daily lives and have from early age an elevated awareness of this danger.

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Cultural and socioeconomic differences cannot and may never be an argument to withhold children from a beneficial risk/challenge while playing.

This document is based on the text contained within EN 1176 and the working group accepts that there may be variations in working practices in different countries. Irrespective of established systems, inspectors need to have necessary competence to undertake the tasks.

The lack of safety knowledge by some product and layout designers cannot be compensated for by the expertise of inspectors. Operators responsible for several playgrounds need some level of knowledge as well. Installers will at least have correctly detailed technical documents to work with but a basic level of knowledge about safety could help to solve problems arising during installation. Manufacturers should have a high level of knowledge. In general, safety relates to everything from the inception of a playground project to the end of its lifecycle.

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1 Scope

This framework forms a guideline for the education, examination and evaluation of the inspectors' competence concerning public playground and recreational sports environments. For each specific task an inspector may need to perform, this guideline describes the knowledge required and also sets out the basic level of knowledge necessary.

The standard EN 1176 parts 1 and 7 detail the different types or levels of inspections required to help provide a play environment that is suitable for children to play in. The different types of inspections demand different levels of knowledge; these are:

- routine visual inspection;
- operational inspection;
- annual main inspection;
- post-installation inspection.

As well as these inspections identified in the standard there are also other inspections or activities that are useful in helping to ensure the safe operation of a play environment:

- post-accident inspection;
- pre-installation consultation;
- mid-installation surveillance.

In this guideline there is a [\(broader explanation of what these inspections are and how they should be performed\)](#).

This guideline doesn't cover the [competence of staff conducting product certification](#).

Due to the variety of items that can be encountered in the playground environment this guideline can be used to evaluate an inspector's competence for the following equipment e.g.:

- playground equipment (EN 1176-1, -6, 1-10 and -11);
- roller-sport infrastructures (EN 14974);
- multi-sport arenas (EN 15312);
- outdoor exercise equipment (EN 16630);
- bouldering walls (EN 12572-2);
- portable and permanent socketed goals (prEN 16579);
- parkour facilities (EN 16899);
- adventure playgrounds.

This Technical Report is not intended for:

- toys (EN 71);
- rope courses (EN 15567);
- inflatable play equipment (EN 14960).

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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 1176-1:2008, *Playground equipment and surfacing - Part 1: General safety requirements and test methods*

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

EN ISO 12100, *Safety of machinery - General principles for design - Risk assessment and risk reduction (ISO 12100)*

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

inspector

competent person qualified to undertake inspections of play environments

3.2

competence

having suitable and sufficient training, skill and knowledge to perform the task

3.3

routine visual inspection

inspection intended to identify obvious hazards that can result from normal use, vandalism or weather conditions

Note 1 to entry: Typical hazards can take the form of broken parts or broken bottles.

3.4

operational inspection

inspection, more detailed than routine visual inspection, to check the operation and stability of the equipment

Note 1 to entry: Typical checks include an examination for wear.

3.5

annual main inspection

inspection intended to establish the overall level of safety of equipment, foundations and playing surfaces

Note 1 to entry: Typical checks include the effects of weather, evidence of rotting or corrosion and any change in the level of safety of the equipment as a result of repairs made, or of added or replaced components.

3.6**post-installation inspection**

inspection undertaken prior to the opening of a playground for public use, intended to assess the equipment and environment and to assess the overall level of safety of the playground environment

3.7**post-accident inspection**

inspection undertaken after a serious injury on a playground to assess the safety of the area and to help assist in determining if any immediate works are required

3.8**inspection report**

document produced as a result of an inspection to a predetermined or agreed specification

3.9**playground environment**

area, open to public access containing the play equipment, ancillary items, landscaping and/or natural features

3.10**playground equipment**

equipment and structures, including components and constructional elements with, or on which, children can play outdoors or indoors, either individually or in groups, according to their own rules or own reasons for playing which can change at any time

Note 1 to entry: Definition from EN 1176-1.

3.11**adventure playground**

fenced, secured playgrounds run and staffed in accordance with the widely accepted principles that encourage children's development and often use self-build equipment

3.12**knowledge**

understanding of information achieved by experience and study

3.13**risk assessment**

process including a combination of risk analysis, risk evaluation and optional risk-benefit analysis with the purpose of determining a quantitative or qualitative value related to circumstances resulting in a hazard

Note 1 to entry: Regarding playground equipment a risk assessment is the determination of quantitative or qualitative value of risk related to a specific situation and an identified hazard. Quantitative risk assessment requires calculations of three components of risk (R): The severity of the potential injury (S), the probability of the incident occurring (P) and the exposure to the hazard (E).

$$R = S * P * E$$

FprCEN/TR 17207:2017 (E)**3.14****safety**

achieved state in the absence of unacceptable risk

Note 1 to entry: Safety is achieved by reducing risk to a tolerable level.

Note 2 to entry: Safety is often misunderstood by the general public as the state of being protected from all hazards. Instead safety is the state of being protected from recognized hazards that are likely to cause harm.

3.15**risk**

combination of harm occurring and the severity of injury that may occur

Note 1 to entry: Some level of risk is inherent in playgrounds. The challenge involved in use of equipment is considered to be beneficial to the users.

3.16**harm**

injury or damage to the health of people

3.17**hazard**

potential source of harm

3.18**acceptable risk**

level of risk which is tolerable in a given context (public park vs. kindergarten for example) based on the current values of society

3.19**activity area**

general term for areas where inspections take place covering but not limited to playground equipment, fitness equipment, wheel sports etc

3.20**child development**

multifaceted, integral, and continual process of change in which children become able to handle ever more complex levels of moving, thinking, feeling, and relating to others

Note 1 to entry: See Annex A for additional information about child development.

3.21**residual risk**

remaining risk after risk reduction measures (protective measures) have been taken

Note 1 to entry: Following risk reduction measures, the residual risk is less than or equal to acceptable risk, thus providing safety.

3.22**risk analysis**

systematic use of available information to identify hazards and to eliminate risk

3.23**risk evaluation**

procedure based on the risk analysis to determine whether a tolerable risk has been achieved