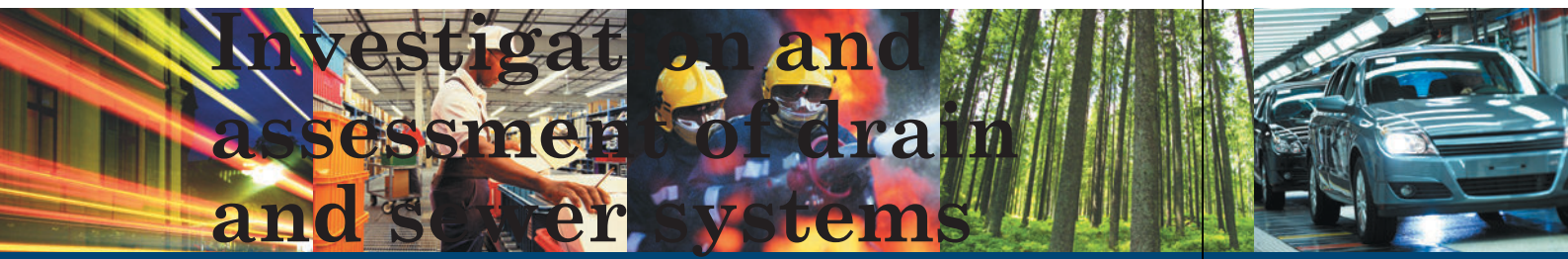
BRITISH STANDARD

BS EN 13508-2:2003 +A1:2011

Incorporating corrigendum March 2007



Investigation and assessment of drain and sewer systems outside buildings —

Part 2: Visual inspection coding system

ICS 93.030

National foreword

This British Standard is the UK implementation of EN 13508-2:2003+A1:2011, incorporating corrigendum March 2007. It supersedes BS EN 13508-2:2003, which is withdrawn.

The start and finish of text introduced or altered by corrigendum is indicated in the text by tags [AC⟩ ⟨AC]. Text altered by CEN corrigendum March 2007 is indicated in the text by [AC$_1$⟩ ⟨AC$_1$].

The start and finish of text introduced or altered by amendment is indicated in the text by tags. Tags indicating changes to CEN text carry the number of the CEN amendment. For example, text altered by CEN amendment A1 is indicated by [A$_1$⟩ ⟨A$_1$].

The UK participation in its preparation was entrusted to Technical Committee B/505, Waste water engineering.

A list of organizations represented on this committee can be obtained on request to its secretary.

The UK has had a coding system, the Manual of Sewer Condition Classification (MSCC), for many years. Clause 5.4 allows the national equivalent codes to be used in place of the language independent codes described in EN 13508-2. A national equivalent coding system complying with the requirements of EN 13508-2 has been produced and is described in National Annex NB. This is very similar to the MSCC coding system.

Users with archives of data coded according to the MSCC can retain this data. Guidance on converting such data into the system described in EN 13508-2 can be found in National Annex NA.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

Compliance with a British Standard cannot confer immunity from legal obligations.

This British Standard was published under the authority of the Standards Policy and Strategy Committee on 31 May 2006

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Amendments/corrigenda issued since publication

Amd. No.	Date	Comments
17163 Corrigendum No. 1	29 June 2007	See national foreword
	30 September 2011	Implementation of CEN amendment A1:2011 and revision of National Annexes NA and NB

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 13508-2:2003+A1

May 2011

ICS 93.030

Supersedes EN 13508-2:2003

English Version

Investigation and assessment of drain and sewer systems outside buildings - Part 2: Visual inspection coding system

Investigation et évaluation des réseaux d'assainissement à l'extérieur des bâtiments - Partie 2: Système de codage de l'inspection visuelle

Untersuchung und Beurteilung Zustand von Entwässerungssystemen außerhalb von Gebäuden - Teil 2: Kodiersystem für die optische Inspektion

This European Standard was approved by CEN on 4 November 2002 and includes Corrigendum 1 issued by CEN on 21 March 2007 and Amendment 1 approved by CEN on 17 March 2011.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, 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

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Ref. No. EN 13508-2:2003+A1:2011: E

Contents

Foreword

This document (EN 13508-2:2003+A1:2011) has been prepared by Technical Committee CEN/TC 165 “Wastewater engineering”, the secretariat of which is held by DIN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by November 2011, and conflicting national standards shall be withdrawn at the latest by November 2011.

This document includes Corrigendum 1 issued by CEN on 21 March 2007 and Amendment 1 approved by CEN on 17 March 2011.

This document supersedes EN 13508-2:2003.

The start and finish of text introduced or altered by amendment is indicated in the text by tags ⟦A1⟩ ⟨A1⟧.

The modifications of the related CEN Corrigendum have been implemented at the appropriate places in the text and are indicated by the tags ⟦AC⟩ ⟨AC⟧.

The Standard series EN 13508 " Condition of drain and sewer systems outside buildings " contains the following parts

— Part 1: General requirements

— Part 2: Visual inspection coding system

Other parts, dealing with other methods of inspection, can be added later.

In drafting this part of this European Standard account has been taken of other available standards, in particular EN 752 “Drain and sewer systems outside buildings”

To allow for the alteration of existing data and coding system software in accordance with this standard and training of inspection personnel, a transition period is granted until (DAV + 36 month) for the withdrawal of conflicting national standards and the application of this standard.

Where there are existing inspection programmes to meet legal requirements commenced before the publication of this standard, it is permitted to complete such programmes using the original coding system.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, 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.

Introduction

In producing this draft standard, existing national coding systems have been reviewed. To preserve the link with existing data, TC165/WG22 has tried to ensure that there is an equivalent code, or combination of codes, for every observation recorded in an existing national system. [A1] This will allow existing data to be transferred to the new coding system. [A1]

At present the amount of detail recorded varies between countries. The choice of features to be recorded and the extent of detail to be included is left to the employing authority.

Before the standard can be fully applied, extensive retraining of operators and modification of software will be necessary.

1 Scope

[A1] This European Standard is applicable to the investigation and assessment of drain and sewer systems outside buildings. [A1]

[A1] It is applicable to drain and sewer systems, which operate essentially under gravity, from the point where the wastewater leaves a building or roof drainage system, or enters a road gully, to the point where it is discharged into a treatment works or receiving water. [A1] Drains and sewers below buildings are included provided that they do not form part of the drainage system of the building.

This part of the European Standard specifies a coding system for the description of the internal condition of drains, sewers, manholes and inspection chambers identified through visual inspection. Where appropriate, it can also be used for pressure and vacuum systems in accordance with the requirements of the employing authority. [A1] Visual inspection of drain and sewer systems can be carried out as part of the investigation in order to undertake the assessment. [A1]

This part of the European Standard does not generally specify requirements for carrying out inspections.

2 Normative references

[A1] The following referenced documents are indispensable for the application 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. [A1]

EN 476:1997, *General requirements for components used in discharge pipes, drains and sewers for gravity systems*

[A1] EN 752:2008, *Drain and sewer systems outside buildings* [A1]

[A1] EN 1085:2007, *Wastewater treatment — Vocabulary* [A1]

ISO 8601, *Data elements and interchange formats — Information interchange — Representation of dates and times*

3 Terms and definitions

For the purposes of this European Standard, the following terms and definitions apply:

NOTE These definitions are general terms. Other specific terms are defined in the text.

3.1
adjusting construction
[A1] part of a manhole or inspection chamber between the cover and frame and either the shaft or the cover slab. This is used to adjust the level of the cover and frame to accord with the required surface level [A1]

3.2
backdrop manhole
manhole with a connection, by means of a vertical pipe, at or just above invert, from a drain or sewer at a higher level
[A1] [EN 752:2008, Term 3.5] [A1]

3.3
benching
near horizontal surface adjacent to the channel in a manhole or inspection chamber, or a large sewer

3.4
chamber
part of a manhole or inspection chamber providing working space above the channel

3.5
chamber unit
component part of a manhole or inspection chamber manufactured as a single entity and intended to be joined with other chamber units

3.6
combined system
[A1] drain and sewer system designed to carry both foul wastewater and surface water in the same pipeline(s) [A1]
[A1] [EN 752:2008, Term 3.12, EN 1085:2007, Term 2110] [A1]

3.7
connection
general term used for the location at which one pipeline joins another pipeline or a manhole or inspection chamber

3.8
drain
pipeline, usually underground, designed to carry wastewater and/or surface water from a source to a sewer.
[A1] [EN 752:2008, Term 3.19, EN 1085:2007, Term 2250] [A1]

3.9
drain system
network of pipelines and ancillary works that conveys wastewater and/or surface water to a cesspool, sewer system or other place of disposal
[A1] *deleted text* [A1]

3.10
employing authority
organisation which owns or is responsible for the [A1] management [A1] of a drain or sewer system

3.11
exfiltration
[A1] escape of wastewater from a drain or sewer system into surrounding ground [A1]
[A1] [EN 752:2008, Term 3.24, EN 1085:2007, Term 2230] [A1]

3.12
gradient
ratio between the vertical and the horizontal projections of a pipe length
〚A1〛 *deleted text* 〚A1〛

3.13
gravity system
〚A1〛 drain or sewer system where flow is caused by the force of gravity and where the pipeline is designed usually to operate partially full 〚A1〛
〚A1〛 [EN 752:2008, Term 3.30, EN 1085:2007, Term 2260] 〚A1〛

3.14
groundwater
water present in the sub-surface strata
〚A1〛 *deleted text* 〚A1〛

3.15
infiltration
〚A1〛 <into the drain and sewer system> unwanted flow resulting from an ingress of groundwater into a drain or sewer system 〚A1〛
〚A1〛 [EN 752:2008, Term 3.33, EN 1085:2007, Term 2220] 〚A1〛

3.16
inspection chamber
〚A1〛 chamber with a removable cover constructed on a drain or sewer that permits the introduction of cleaning and inspection equipment from surface level, but does not provide access for personnel 〚A1〛
〚A1〛 [EN 752:2008, Term 3.34] 〚A1〛

3.17
invert
lowest point of the internal surface of the barrel of a pipe or channel at any cross section
[EN 476:1997]

3.18
joint
location at which the ends of two adjacent pipe units are joined together longitudinally

3.19
junction
connection made using a prefabricated junction pipe unit

3.20
landing
intermediate rest platform used to limit the height of a run of steps in a manhole

3.21
manhole
chamber with a removable cover constructed on a drain or sewer to permit entry by personnel
〚A1〛 [EN 752:2008, Term 3.41] 〚A1〛

3.22
node
manhole, inspection chamber, outfall, rodding eye or other significant intermediate point

3.23
outfall
〚A1〛 structure or point from which wastewater is discharged to a wastewater treatment plant or receiving water 〚A1〛
〚A1〛 [EN 752:2008, Term 3.42, EN 1085:2007, Term 1280] 〚A1〛

3.24
pipe unit
component part of a drain or sewer manufactured as a single entity and intended to be joined with other pipe units

3.25
pipeline
assembly of pipes, fittings, masonry and insitu concrete units and joints between manholes or other structures.

3.26
pipeline length
continuous section of drain or sewer between two adjacent nodes

3.27
pipe unit length
length of a manufactured pipe unit used in the construction of a pipeline

3.28
ramp manhole
manhole with a steeply inclined pipe or channel from a drain or sewer at a higher level
[A1] [EN 752:2008, Term 3.47] [A1]

3.29
receiving water
[A1] any type of water body where water or wastewater is discharged [A1]
[A1] [EN 752:2008, Term 3.49, EN 1085:2007, Term 1100] [A1]

3.30
rehabilitation
[A1] measures for restoring or upgrading the performance of existing drain and sewer systems [A1]
[A1] [EN 752:2008, Term 3.50] [A1]

3.31
repair
rectification of local damage
[A1] [EN 752:2008, Term 3.53] [A1]

3.32
rising main
[A1] pipe through which wastewater is pumped [A1]
[A1] [EN 752:2008, Term 3.56, EN 1085:2007, Term 2170] [A1]

[A1] *deleted text* [A1]

[A1] **3.33** [A1]
sewer
[A1] pipeline or other construction, usually underground, designed to carry wastewater from more than one source [A1]
[A1] [EN 752:2008, Term 3.65, EN 1085:2007, Term 2270] [A1]

[A1] **3.34** [A1]
sewer system
[A1] network of pipelines and ancillary works which conveys wastewater from drains to a treatment works or other place of disposal [A1]
[A1] [EN 752:2008, Term 3.66, EN 1085:2007, Term 2180] [A1]

[A1] **3.35** [A1]
shaft
upper part of a manhole or inspection chamber between the adjusting construction and the chamber

[A1] **3.36** [A1]
surface water
water from precipitation, which has not seeped into the ground and which is discharged to the drain or sewer system directly from the ground or from exterior building surfaces
[A1] [EN 752:2008, Term 3.73, EN 1085:2007, Term 2070] [A1]