REOVEEPUHASTID. OSA 8: REOVEESETTE KÄITLEMINE JA LADUSTAMINE

Wastewater treatment plants - Part 8: Sludge treatment and storage

EESTI STANDARDIMIS- JA AKREDITEERIMISKESKUS
ESTONIAN CENTRE FOR STANDARDISATION AND ACCREDITATION

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 12255-8:2024 sisaldab Euroopa standardi EN 12255-8:2024 ingliskeelset teksti.	This Estonian standard EVS-EN 12255-8:2024 consists of the English text of the European standard EN 12255-8:2024.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation and Accreditation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 08.05.2024.	Date of Availability of the European standard is 08.05.2024.
Standard on kättesaadav Eesti Standardimis-ja Akrediteerimiskeskusest.	The standard is available from the Estonian Centre for Standardisation and Accreditation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile standardiosakond@evs.ee.

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English Version

Wastewater treatment plants - Part 8: Sludge treatment and storage

Stations d'épuration - Partie 8 : Stockage et traitement des boues

Kläranlagen - Teil 8: Schlammbehandlung und -lagerung

This European Standard was approved by CEN on 27 February 2024.

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European foreword

This document (EN 12255-8:2024) 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of an identical text or by endorsement, at the latest by November 2024, and conflicting national standards shall be withdrawn at the latest by November 2024.

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 EN 12255-8:2001.

The main changes compared to the previous edition EN 12255-8:2001 are listed below:

a) comprehensive revision and additions in all sections;

b) addition of design recommendations;

c) addition of sludge drying systems;

d) adaptation to the current state of the art;

d) updating of the Normative references;

e) editorial revision.

It is the eighth part prepared by Working Group CEN/TC 165/WG 40 relating to the general requirements and processes for treatment plants for a total number of inhabitants and population equivalents (PT) over 50. EN 12255 with the generic title "*Wastewater treatment plants*" consists of the following Parts:

— *Part 1: General construction principles*

— *Part 2: Storm management systems*

— *Part 3: Preliminary treatment*

— *Part 4: Primary treatment*

— *Part 5: Lagooning processes*

— *Part 6: Activated sludge process*

— *Part 7: Biological fixed-film reactors*

— *Part 8: Sludge treatment and storage*

— *Part 9: Odour control and ventilation*

— *Part 10: Safety principles*

— *Part 11: General data required*

— *Part 12: Control and automation*

— *Part 13: Chemical treatment — Treatment of wastewater by precipitation/flocculation*

— *Part 14: Disinfection*

— *Part 15: Measurement of the oxygen transfer in clean water in aeration tanks of activated sludge plants*

— *Part 16: Physical (mechanical) filtration*

NOTE 1 Part 2 is under preparation.

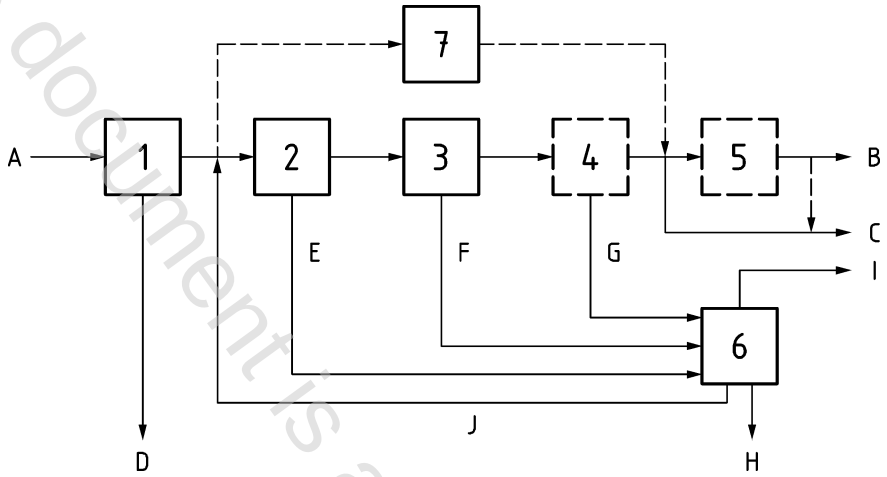
NOTE 2 For requirements on pumping installations at wastewater treatment plants see EN 752 and EN 16932 (all parts).

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.

According to the CEN-CENELEC Internal Regulations, the national standards organisations 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, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and the United Kingdom.

Introduction

Differences in wastewater treatment throughout Europe have led to a variety of systems being developed. This document gives fundamental information about the systems; this document has not attempted to specify all available systems. A generic arrangement of wastewater treatment plants is illustrated below in Figure 1.



Key

1	preliminary treatment
2	primary treatment
3	secondary treatment
4	tertiary treatment
5	additional treatment (e.g. disinfection or removal of micropollutants)
6	sludge treatment
7	lagoons (as an alternative)
A	raw wastewater
B	effluent for re-use (e.g. irrigation)
C	discharged effluent
D	screenings and grit
E	primary sludge
F	secondary sludge
G	tertiary sludge
H	stabilized sludge
I	digester gas
J	returned water from dewatering

Figure 1 — Schematic diagram of wastewater treatment plants

Detailed information additional to that contained in this document can be obtained by referring to the bibliography.

The primary application is for wastewater treatment plants designed for the treatment of domestic and municipal wastewater.

1 Scope

This document specifies design principles and performance requirements for sludge treatment and storage facilities at wastewater treatment plants serving more than 50 PT.

Guidance on operation is provided where it is necessary in order to facilitate the design of control and automation and design access to points of operation.

NOTE Other sludges and organic wastes can be treated together with municipal sewage sludge where national and local regulations permit.

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 12255-9, *Wastewater treatment plants — Part 9: Odour control and ventilation*

EN 12255-10, *Wastewater treatment plants — Part 10: Safety principles*

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:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at https://www.electropedia.org/

3.1
psychrophilic
process conditions for microorganisms which are active below 30 °C

Note 1 to entry: In the context of wastewater applications the effective temperature range for this is higher than given in some other disciplines.

3.2
mesophilic
process conditions for microorganisms which are active at temperatures between 30 °C and 45 °C

Note to entry: In the context of wastewater applications the minimum temperature for this is higher than given in some other disciplines.

3.3
thermophilic
process conditions for microorganisms which are active at temperatures above 45 °C

3.4
pseudo stabilisation
process preventing organic degradation so long as particular conditions (such as pH value or dryness) are maintained, but for which degradation recommences when the conditions are no longer met

3.5
stock solution
partially prepared mixture of chemical and water in a condition to facilitate handling or distribution