

Wastewater treatment plants - Part 10: Safety principles

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EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 12255-10:2001 sisaldab Euroopa standardi EN 12255-10:2000 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 18.05.2001 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 12255-10:2001 consists of the English text of the European standard EN 12255-10:2000.</p> <p>This document is endorsed on 18.05.2001 with the notification being published in the official publication of the Estonian national standardisation organisation.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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<p>Käsitlusala: This standard is for the protection of employees and defines the safety requirements for wastewater treatment plants to be constructed or reconstructed as follows: - for structures and parts of structures where safety factors have to be taken into account and for - all components of the technical equipment, as far as safety requirements have to be observed in the planning and construction of these parts of the plant.</p>	<p>Scope: This standard is for the protection of employees and defines the safety requirements for wastewater treatment plants to be constructed or reconstructed as follows: - for structures and parts of structures where safety factors have to be taken into account and for - all components of the technical equipment, as far as safety requirements have to be observed in the planning and construction of these parts of the plant.</p>
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Võtmesõnad: safety require, sewage, sewage clarification, sewage purification, sewage purification plant, sewage treatment, sewage treatment plants, sewage treatment works, siting, specification (approval), specifications, warning system, water practice, workplace safety

ICS 13.060.30

English version

Wastewater treatment plants

Part 10: Safety principles

Stations d'épuration – Partie 10:
Principes de sécurité

Kläranlagen – Teil 10: Sicherheits-
technische Baugrundsätze

This European Standard was approved by CEN on 2000-10-27.

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 Central Secretariat or to any CEN member.

The European Standards exist 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 Central Secretariat has the same status as the official versions.

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CEN

European Committee for Standardization
Comité Européen de Normalisation
Europäisches Komitee für Normung

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Foreword

This European Standard has been prepared by Technical Committee CEN/TC 165 "Waste water 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 June 2001, and conflicting national standards shall be withdrawn at the latest by December 2001.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

It is the tenth part prepared by the working groups CEN/TC 165/WG 42 und WG 43 relating to general requirements and processes for wastewater treatment plants for more than 50 PT. The parts of these series are as follows:

- Part 1: General construction principles
- Part 3: Preliminary treatment
- Part 4: Primary settlement
- Part 5: Lagooning processes
- Part 6: Activated sludge processes
- 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 automatization ¹⁾
- Part 13: Chemical treatment
- Part 14: Disinfection ¹⁾
- Part 15: Measurement of the oxygen transfer in clean water in activated sludge aeration tanks
- Part 16: Physical (mechanical) filtration ¹⁾

NOTE For requirements on pumping installations at wastewater treatment plants, provided initially as part 2 "Pumping installations for wastewater treatment plants", see EN 752-6 "Drain and sewer systems outside buildings - Part 6: Pumping installations".

This European Standard sets rules for general minimum requirements only. Special safety requirements are defined in the national standards concerned.

The parts EN 12255-1, EN 12255-3 to EN 12255-8 and EN 12255-10 and EN 12255-11 became implemented together as a european package (Resolution BT 152/1998). The date of withdrawl (dow) of all conflicting national standards is 2001-12-31. Until the date of withdrawl is reached the National and the already published European standards both coexist.

1 Scope

This European Standard is for the protection of employees and defines safety requirements for wastewater treatment plants to be constructed or reconstructed as follows:

- for structures and parts of structures where safety factors have to be taken into account;
- all components of the technical equipment, as far as safety requirements have to be observed in the planning and construction of these parts of the plant.

It may be possible that national regulations exceed the requirements laid down in this standard. In this case these requirements shall be precisely described.

Special safety requirements, e.g. in the fields of electrical and mechanical engineering which are dealt with in other regulations shall be observed although they are not mentioned specifically in this standard.

This standard is of relevance only to new wastewater treatment plants and new parts for existing plants designed and constructed after the effective date. This standard is not to be applied retrospectively to existing plants.

Detailed informations additional to that contained in this standard may be obtained by referring to the bibliography.

¹⁾ in preparation

2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

EN 124, *Gully tops and manhole tops for vehicular and pedestrian areas – Design requirements, type testing, marking, quality control.*

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

EN 752-6, *Drain and sewer systems outside buildings – Part 6: Pumping installations.*

EN 1085, *Wastewater treatment – Vocabulary.*

prEN 12255-1:1996, *Waste water treatment plants – Part 1: General construction principles.*

3 Terms and definitions

For the purposes of this European Standard, the terms and definitions given in EN 1085 and the following apply.

3.1

Sewerage within a wastewater treatment plant

All structures used for collecting, draining or storing of wastewater within a wastewater treatment plant.

NOTE Sewerage within a wastewater treatment plant includes

- open and closed channels;
- pumping stations;
- storm water drainage and treatment systems.

3.2

Wastewater treatment plant

Facility for the physical, biological and chemical treatment of wastewater inclusive of all facilities for the treatment of solid wastes (screenings, grit, sludge).

3.3

Confined spaces

All structures of sewerage and wastewater treatment plants which are in contact with the wastewater, sludge, hazardous chemicals, etc., as far as they are covered or sunken.

NOTE Confined spaces also include inspection manholes and other shafts even if they are not in open contact with the wastewater.

4 General requirements

Compliance with safety regulations has to be an integral part of the design and construction of the facilities.

4.1 Confined spaces hazards and warning systems

4.1.1 Confined spaces

Special consideration is required for confined spaces in wastewater treatment plants which include e.g.:

- conduits;
- shafts, inspection manholes, seepage water shafts;
- basins (covered or sunken);
- drop structures;
- valve structures;
- inlet and outlet structures;
- sunken or enclosed screening plants;
- pumping stations (dry or wet wells);
- sludge silos and covered thickeners;
- digestion tanks;
- gasholders (gasometers);
- completely covered plants.