Wastewater treatment plants - Part 3: Preliminary treatment

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EESTI STANDARDI EESSÕNA **NATIONAL FOREWORD**

Käesolev Eesti standard EVS-EN 12255-3:2001 sisaldab Euroopa standardi EN 12255-3 + AC:2000 ingliskeelset teksti. Käesolev dokument on jõustatud 16.02.2001 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes. Standard on kättesaadav Eesti standardiorganisatsioonist.	This Estonian standard EVS-EN 12255-3:2001 consists of the English text of the European standard EN 12255-3 + AC:2000. This document is endorsed on 16.02.2001 with the notification being published in the official publication of the Estonian national standardisation organisation. The standard is available from Estonian standardisation organisation.

Käsitlusala: This part of this European Standard specifies the requirements for preliminary treatment of wastewater at wastewater treatment plants for over 50 PT. The primary application is for wastewater treatment plants designed for the treatment of domestic and municipal wastewater.	**Scope:** This part of this European Standard specifies the requirements for preliminary treatment of wastewater at wastewater treatment plants for over 50 PT. The primary application is for wastewater treatment plants designed for the treatment of domestic and municipal wastewater.

ICS 13.060.30

Võtmesõnad: draft, equipment, maintenance, pipelines, preparation, safety, sewage clarification, sewage purification, sewage treatment plants, shut-off valves, specification (approval), specifications

EUROPEAN STANDARD
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English version

Wastewater treatment plants

Part 3: Preliminary treatment
(includes Corrigendum AC : 2000)

Stations d'épuration –
Partie 3: Prétraitements
(corrigendum AC : 2000 inclus)

Kläranlagen –
Teil 3: Abwasservorreinigung
(enthält Berichtigung AC : 2000)

This European Standard was approved by CEN on 2000-08-17 and Corrigendum AC on 2000-12-20.

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 March 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 third part prepared by the Working Groups CEN/TC 165/WG 42 and 43 relating to the general requirements and processes for treatment plants for over 50 PT. The parts of the 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 automation[1])
Part 13: Chemical treatment
Part14: Disinfection[1])
Part 15: Measurement of the oxygen tranfer in clean water in aeration tanks of activated sludge plants
Part 16: Physical (mechanical) filtration[1])

NOTE For requirements on pumping installations at wastewater treatment plants and in their water feed field, 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.

EN 12255-1, EN 12255-3 to EN 12255-8 and EN 12255-10 and EN 12255-11 were implemented together as a European package (Resolution BT 152/1998). The date of withdrawal (dow) of all conflicting national standards is 2001-12-31. Until the date of withdrawal is reached, the national and the published European will be likewise valid.

1 Scope

This part of this European Standard specifies the requirements for preliminary treatment of wastewater at wastewater treatment plants for over 50 PT.

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

Preliminary treatment may include one or more of the following options:

— screening;

— grit removal,

— grease separation;

[1]) In preparation.

— flow balancing and flow separation.

NOTE Flow measurement and/or sampling provision may be included with any of the chosen options.

Differences in wastewater treatment throughout Europe have led to a variety of systems being developed. This standard gives fundamental informations about the systems; this standard has not attempted to specify all available systems.

Detailed information additional to that contained in this standard may be obtained by referring to the Bibliograpy.

2 Normative references

This European Standard incorporates by dated or undated references, provision 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 European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

EN 1085
Wastewater treatment — Vocabulary

prEN 12255-1:2000
Wastewater treatment plants — Part 1: General construction principles

prEN 12255-10:2000
Wastewater treatment plants — Part 10: Safety principles

prEN 12255-11:1998
Wastewater treatment plants — Part 11: General data

3 Terms and definitions

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

4 Requirements

4.1 General

Preliminary treatment units are an important part of the overall wastewater treatment process, since they serve to ensure that the subsequent main treatment stages operate effectively. The preliminary process requires the removal of large floating and suspended solids, grit, grease and oil. Unless preliminary units are correctly designed, variations in flow may cause operational problems in the subsequent processes. This is particularly true of smaller plants.

The type and size of units are influenced by the overall system and the nature of the wastewater to be treated. Combined sewerage systems usually have greater variations in flow than separate systems so that storm water separation arrangements and/or flow balancing may be necessary. Grit removal may be required to prevent damage to following treatment units and pumps. Where treatment plants receive significant amounts of organic industrial wastes, e. g. from food processing, the provision of grease and oil removal units is essential.

4.2 Planning

The design considerations for a preliminary treatment system shall include a combination of the acceptable options to fulfil the process. Selection shall be based on an assessment of the characteristics of the wastewater to be treated, the size of the installation and its technical and economic consequences on subsequent processes.