ICS 13.060.30 SLOVENSKÁ TECHNICKÁ NORMA December 2023

| STN | **Čistiarne odpadových vôd<br>Časť 13: Chemické čistenie<br>Čistenie odpadových vôd<br>zrážaním/vločkovaním** | **STN<br>EN 12255-13**<br><br>75 6410 |
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Wastewater treatment plants - Part 13: Chemical treatment - Treatment of wastewater by precipitation/flocculation

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 11/23

Rozpracované prekladom.

Obsahuje: EN 12255-13:2023

Oznámením tejto normy sa ruší
STN EN 12255-13 (75 6410) z apríla 2005

# EUROPEAN STANDARD
# NORME EUROPÉENNE
# EUROPÄISCHE NORM

# EN 12255-13

July 2023

ICS 13.060.30 Supersedes EN 12255-13:2002

English Version

# Wastewater treatment plants - Part 13: Chemical treatment - Treatment of wastewater by precipitation/flocculation

Stations d'épuration - Partie 13: Traitement chimique - Traitement des eaux usées par précipitation/floculation

Kläranlagen - Teil 13: Chemische Behandlung - Abwasserbehandlung durch Fällung/Flockung

This European Standard was approved by CEN on 24 April 2023.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
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# European foreword

This document (EN 12255-13:2023) 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of an identical text or by endorsement, at the latest by January 2024, and conflicting national standards shall be withdrawn at the latest by January 2024.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 12255-13:2002.

This is the thirteenth 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.

The EN 12255 series 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*

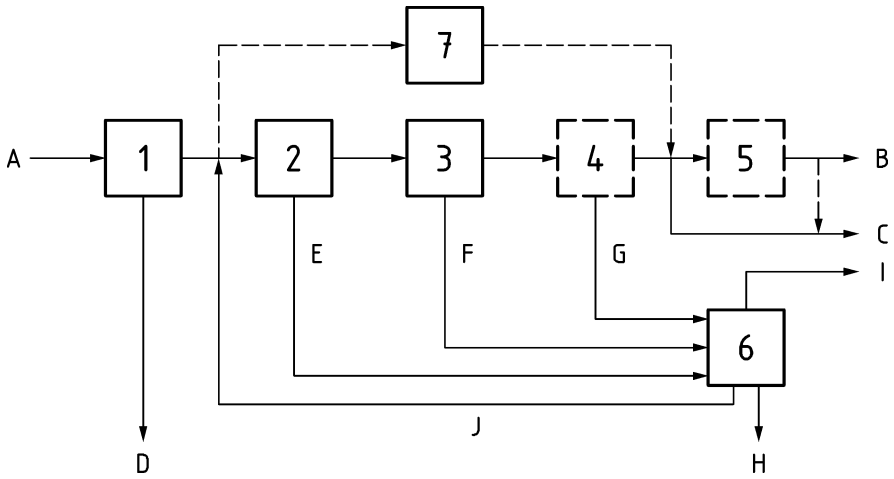
NOTE Part 2 is under preparation.

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 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**

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

NOTE For requirements on pumping installations at wastewater treatment plants see EN 752, *Drain and sewer systems outside buildings* and EN 16932, *Drain and sewer systems outside buildings — Pumping systems*:

— *Part 1: General requirements;*

— *Part 2: Positive pressure systems;*

— *Part 3: Vacuum systems.*

# 1 Scope

This document specifies the requirements for chemical treatment of wastewater by precipitation/flocculation for removal of phosphorus and suspended solids.

The application of polymers is not described in this document.

This document has not attempted to specify all available practices.

NOTE Chemical treatment can be performed in combination with primary and more commonly with secondary treatment, but it can also be performed as separate tertiary treatment, usually in combination with filtration (see EN 12255-16). Chemical treatment can provide a potential contribution to the **circular economy** through the recovery of materials, such as phosphorus, from wastewater or sludge.

# 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 12255-1, *Wastewater treatment plants - Part 1: General construction principles*

EN 12255-11, *Wastewater treatment plants - Part 11: General data required*

EN 16932-1, *Drain and sewer systems outside buildings - Pumping systems - Part 1: General requirements*

EN 16932-2, *Drain and sewer systems outside buildings - Pumping systems - Part 2: Positive pressure systems*