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WASTEWATER TREATMENT PLANTS - PART 12: CONTROL AND AUTOMATION

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Wastewater treatment plants - Part 12: Control and automation

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automatisation

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This European Standard was approved by CEN on 1 August 2003.

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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 Management Centre has the same status as the official versions.

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Foreword

This document (EN 12255-12:2003) 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of an identical text or by endorsement, at the latest by March 2004, and conflicting national standards shall be withdrawn at the latest by March 2004.

It is the twelfth 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. EN 12255 with the generic title “Wastewater treatment plants” consists of the following Parts:

- *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.*
- *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 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*.

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).

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, Hungary, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Slovakia, Spain, Sweden, Switzerland and the United Kingdom.

EN 12255-12 :2003 (E)

1 Scope

This European Standard specifies requirements for control and automation systems on wastewater treatment plants for more than 50 PT. If necessary, the control system should also be designed to cover the control of sewer systems in the receiving area of the wastewater treatment plant.

It specifies the necessary information and data which are needed for the design and implementation of such systems as well as the performance requirements with respect to the hard- and software.

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

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

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 European 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 1085:1997, *Waste water treatment — Vocabulary*.

EN 12255-1, *Wastewater treatment plants — Part 1: General construction principles*.

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

3 Terms and definitions

For the purposes of this European Standard, terms and definitions given in EN 1085:1997 and the following apply.

3.1

client-server

computer configuration using one or more servers for handling and storage of the PVs (see 3.10) as data base of the process. The servers transmit the necessary data to the clients for their special applications

3.2

delta-event

SCADA functionality (see 3.11), which initialises recording of a PV (see 3.10) only when it has changed its value by a specified increment

3.3

event-controlled

SCADA functionality (see 3.11), that initialises recording of a PV (see 3.10) only if a specified binary input is active

3.4

LAN

Local Area Network

3.5

multi-tasking

the feature that different running programs ('tasks') are handled by the operating system quasi parallel in time so that they do not interfere with one another and each task gets enough CPU-time for sufficient performance as well as interrupts if required

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