SLOVENSKI STANDARD
oSIST prEN 805:2022

01-junij-2022

Oskrba z vodo - Zahteve za zunanje vodovode in dele

Water supply - Requirements for systems and components outside buildings

Wasserversorgung - Anforderungen an Wasserversorgungssysteme und deren Bauteile außerhalb von Gebäuden

Alimentation en eau - Exigences pour les réseaux extérieurs aux bâtiments et leurs composants

Ta slovenski standard je istoveten z: **prEN 805**

ICS:

93.025	Zunanji sistemi za prevajanje vode	External water conveyance systems

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EUROPEAN STANDARD

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prEN 805

April 2022

ICS 93.025

Will supersede EN 805:2000

English Version

Water supply - Requirements for systems and components outside buildings

Alimentation en eau - Exigences pour les réseaux extérieurs aux bâtiments et leurs composants

Wasserversorgung - Anforderungen an Wasserversorgungssysteme und deren Bauteile außerhalb von Gebäuden

This draft European Standard is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee CEN/TC 164.

If this draft becomes a European Standard, 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.

This draft European Standard was established by CEN 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 CEN-CENELEC Management Centre has the same status as the official versions.

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Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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Contents

Page

European foreword

This document (prEN 805:2022) has been prepared by Technical Committee CEN/TC 164 “Water supply”, the secretariat of which is held by AFNOR.

This document is currently submitted to the CEN Enquiry.

This document supersedes EN 805:2000.

Technical experts have reviewed and refreshed all the clauses of the EN 805:2000 revision to bring this document up to date in particular the implications of climate change and adapting the water supply systems, security, pressure testing, record keeping, resilience of water supply and updates as a result of many constructive comments from active users of the standard across Europe. Many clauses have been refreshed and are not listed here in detail.

Introduction

In specifying the requirements of this document due regard has been taken of the importance of a reliable and safe supply of water for human consumption without excluding other uses of the water from the supply system.

The widely varying water supply legislative requirements, populations, social and climatic conditions across Europe have also been taken into account.

This document does not make any implication with regard to ownership of or responsibility for pipes or other apparatus in the supply system.

1 Scope

This document specifies:

— general requirements for water supply systems outside buildings including potable water mains and service pipes, service reservoirs, other facilities and raw water mains but excluding treatment works and water resources development;

— general requirements for components;

— general requirements for inclusion in product standards which may include specifications which are more stringent;

— requirements for installation, site testing and commissioning.

The requirements of this document apply to:

— the design and construction of new water supply systems;

— the extension of significant areas forming a coherent part of an existing water supply system;

— significant modification and/or rehabilitation of existing water supply systems;

— all those water infrastructure systems since they are key to meet the sustainable goals of the cities and to show the urgent need to invest in them in order to consider fundamental aspects, such as resilience or mitigation/adaptation to climate change.

NOTE It is not intended that existing water supply systems are to be altered to comply with this document, provided that there are no significant detrimental effects on water quantity, security, reliability and adequacy of the supply.

2 Normative references

The following documents are referenced in the text in such a way that some parts of these or their entire contents constitute requirements of this document. With dated references, only the referenced issue is applicable. With undated references, the last issue of the referenced document is applicable (including all changes).

EN 1295-1, *Structural design of buried pipelines under various conditions of loading — Part 1: General requirements*

EN 1508, *Water supply — Requirements for systems and components for the storage of water*

EN 681-1, *Elastomeric seals — Materials requirements for pipe joint seals used in water and drainage applications — Part 1: Vulcanized rubber*

ISO 55000, *Asset management — Overview, principles and terminology*

3 Terms and definitions

For the purposes of this document, the following definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

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

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

3.1 Pressures

For the designation of pressures in English, French and German see Table 1 and A.2.

Table 1 — Designation of pressures in English, French, German

Abbreviation a	**English**	**French**	**German**	
SP	service pressure	pression de service	Versorgungsdruck	System Related
OP	operating pressure	pression de fonctionnement	Betriebsdruck	
DP	design pressure	pression de calcul en régime permanent	Systembetriebsdruck	
MDP	maximum design pressure	pression maximale de calcul	höchster Systembetriebsdruck	
STP	system test pressure	pression d'épreuve du réseau	Systemprüfdruck	
PFA	allowable operating pressure	pression de fonctionnement admissible	zulässiger Bauteilbetriebsdruck	Component Related
PMA	allowable maximum operating pressure	pression maximale admissible	höchster zulässiger Bauteilbetriebsdruck	
PEA	allowable site test pressure	pression d'épreuve admissible sur chantier	zulässiger Bauteilprüfdruck auf der Baustelle	
a Valid for all language versions.				

3.1.1
allowable maximum operating pressure (PMA)
maximum pressure occurring from time to time, including surge, that a component is capable of withstanding in service

3.1.2
allowable operating pressure (PFA)
maximum hydrostatic pressure that a component is capable of withstanding continuously in service

3.1.3
allowable site test pressure (PEA)
maximum hydrostatic pressure that a newly installed component is capable of withstanding for a relatively short duration, in order to ensure the integrity and tightness of the pipeline

3.1.4
design pressure (DP)
maximum operating pressure of the system or of the pressure zone fixed by the designer considering future developments but excluding surge

3.1.5
maximum design pressure (MDP)
maximum operating pressure of the system or of the pressure zone fixed by the designer considering future developments and including surge, where:

— MDP is designated MDPa, when there is a fixed allowance for surge;

— MDP is designated MDPc, when the surge is calculated

3.1.6
operating pressure (OP)
internal pressure which occurs at a particular time and at a particular point in the water supply system

3.1.7
pressure zones
areas of pressure ranges within a water supply system

3.1.8
service pressure (SP)
internal pressure delivered at the point of connection to the consumer's installation at zero flow in the service pipe

3.1.9
surge
rapid fluctuations of pressure caused by flow alterations over short periods of time

3.1.10
system test pressure (STP)
hydrostatic pressure applied to a newly laid pipeline in order to ensure its integrity and tightness

3.2 System

3.2.1
gravity system
system where flow and/or pressure are caused by the force of gravity. There are two kinds of such systems:

— pressurized gravity system, where the pipeline operates full;

— non-pressurized gravity system, where the pipeline operates partially full

3.2.2
local main
water main which connects principal main(s) with service pipes

3.2.3
potable water
water intended for human consumption as defined by the relevant national authorities

3.2.4
principal main
water main serving as a principal distributor within the supply area, normally without direct consumer connections

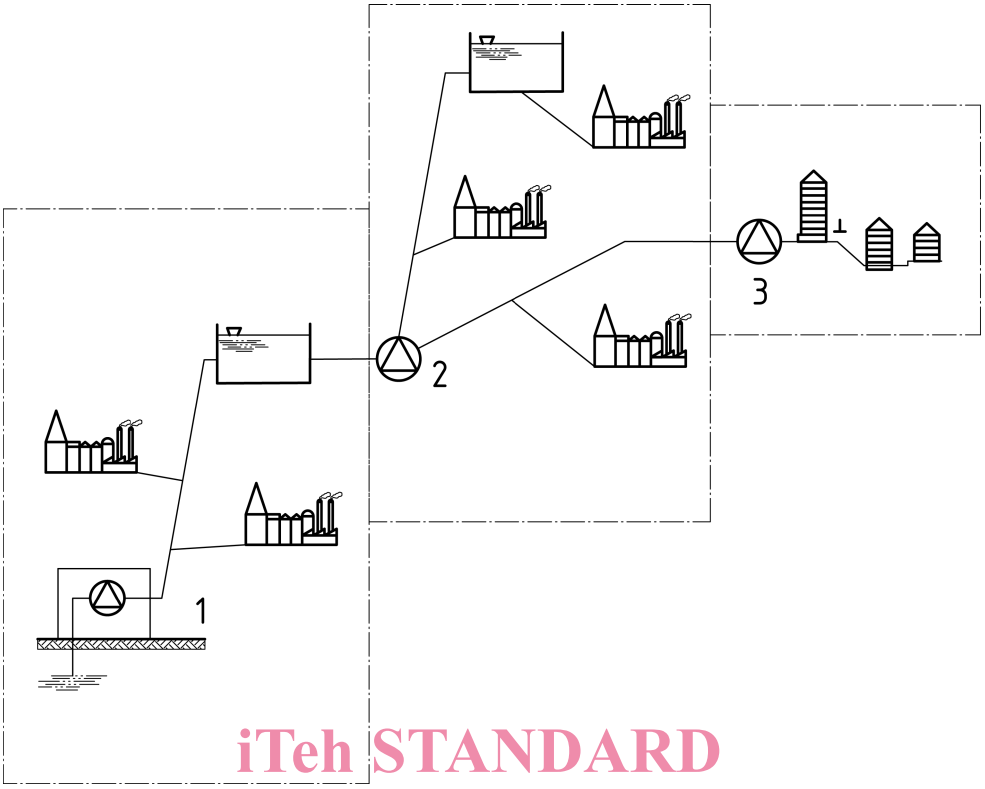
3.2.5
pumped and gravity system
system where the gravity system and the pumped system are used, either separately or in combination, to provide the flow and/or pressure

3.2.6
pumping station
pumping installation designed to provide adequate pressure and flow within the distribution system. Three types can be distinguished (see Figure 1):

— main lift normally at the outlet of the treatment works, or source if there is no treatment, to provide flow to the service reservoir;

— intermediate to deliver flow on the way to a service reservoir or supply area;

— booster to pump directly from and to the area without storage



Key

1	main lift
2	intermediate
3	booster

Figure 1 — Example of different types of pumping stations

3.2.7
pumped system
system where flow and/or pressure are provided by means of one or more pumps and where the pipeline operates full

3.2.8
reservoir
storage facility for water

3.2.9
service pipe
water pipe which supplies water from the local main to the consumer

3.2.10
service reservoir
covered reservoir for potable water which includes water compartment(s), control building, operation equipment and access arrangement providing reserve supplies, pressure stability and balancing demand fluctuations

3.2.11
standby plant
plant or system, such as additional pumps or duplicate mains, installed to provide secondary means for the supply of services in the event of failure or malfunction of the normal operating unit