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Water supply – Requirements for systems and components outside buildings

The European Standard EN 805:2000 has the status of a Swedish Standard. This document contains the official English version of EN 805:2000.

Swedish Standards corresponding to documents referred to in this Standard are listed in ”Catalogue of Swedish Standards”, issued by SIS. The Catalogue lists, with reference number and year of Swedish approval, International and European Standards approved as Swedish Standards as well as other Swedish Standards.

Vattenförsörjning – Utomhussystem och komponenter – Krav

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ICS 13.060.01; 23.040.01

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EN 805

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ICS 13.060.01; 23.040.01

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

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

Central Secretariat: rue de Stassart, 36 B-1050 Brussels

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Contents

Foreword

This European Standard has been prepared by Technical Committee CEN/TC 164 "Water supply", the secretariat of which is held by AFNOR.

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of an identical text or by endorsement, at the latest by July 2000, and conflicting national standards shall be withdrawn at the latest by July 2000.

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.

Introduction

In specifying the requirements of this standard due regard has been taken of the importance of a reliable and safe supply of water for human consumption as well as for the purpose of trade, industry, agriculture and fire fighting.

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

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

1 Scope

This standard specifies :

— general requirements for water supply systems outside buildings (see Figure 1) 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.

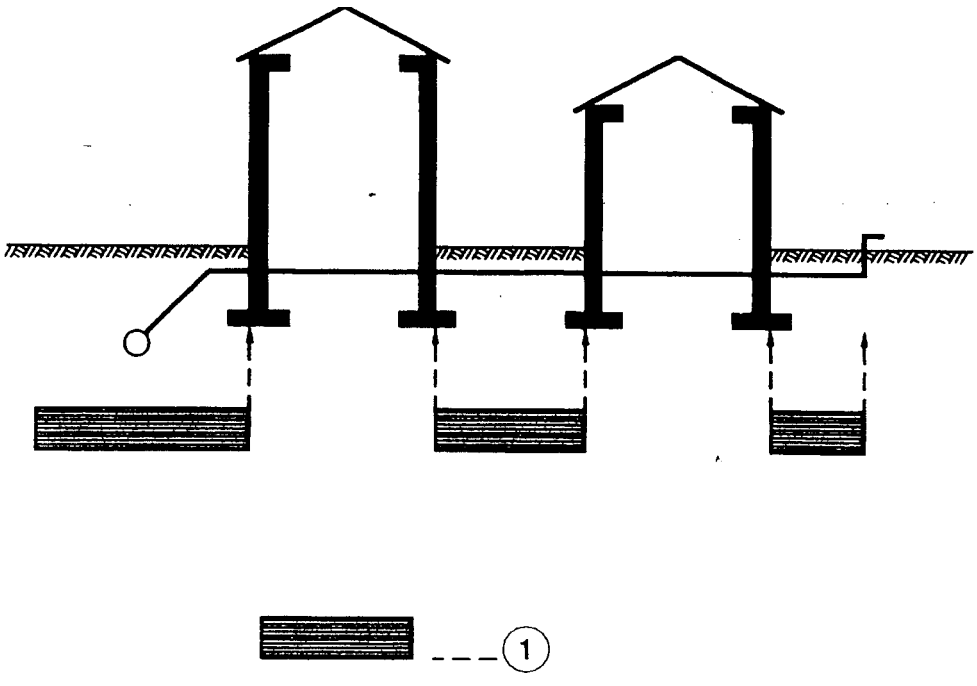
The requirements of this standard apply to :

— 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.

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



Key

1 Field of application of this standard

Figure 1 - Field of application of this standard

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

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 45011, *General criteria for certification bodies operating product certification.*

EN 45012, *General criteria for certification bodies operating quality system certification.*

ISO 48, *Rubber, vulcanized or thermoplastic - Determination of hardness (hardness between 10 IRHD and 100 IRHD).*

EN ISO 9001, *Quality systems - Model for quality assurance in design/development, production, installation and servicing.*

EN ISO 9002, *Quality systems - Model for quality assurance in production, installation and servicing.*

3 Definitions

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

3.1 Pressures

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

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

Abbreviation[a]	English	French	German	
DP	design pressure	pression de calcul en régime permanent	Systembetriebsdruck	System related
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	
OP	operating pressure	pression de fonctionnement	Betriebsdruck	System related
SP	service pressure	pression de service	Versorgungsdruck	
[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 2) :

— 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.