Nederlandse norm

NEN-EN 488

(en)

Stadsverwarmingsbuizen - In de fabriek geïsoleerde buissystemen voor stadsverwarming - Stalen afsluiters voor stalen leidingen met polyurethaanschuim als isolatiemateriaal en met een ommanteling van polyetheen

District heating pipes - Preinsulated bonded pipe systems for directly buried hot water networks - Steel valve assembly for steel service pipes, polyurethane thermal insulation and outer casing of polyethylene

Vervangt NEN-EN 488:2003;
NEN-EN 488:2009 Ontw.

ICS 23.060.01

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Als Nederlandse norm is aanvaard:
- EN 488:2011,IDT

Normcommissie 349054 "Leidingen voor warmtedistributie"

NEN

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Nederlands voorwoord

Voor de in deze norm vermelde normatieve verwijzingen bestaan in Nederland de volgende equivalenten:

vermelde norm	Nederlandse norm	titel
EN 19	NEN-EN 19	Industriële afsluiters - Markering van metalen afsluiters
EN 253:2009	NEN-EN 253:2009	Stadsverwarmingsbuizen - Fabrieksmatig geïsoleerde verbonden buissystemen voor ondergrondse warm water leidingnetten - Rechte buizen samengesteld uit een stalen mediumvoerende buis met polyurethaanschuim als isolatiemateriaal en met een polyetheen buitenmantel
EN 448:2009	NEN-EN 448:2009	Stadsverwarmingsbuizen - Fabrieksmatig geïsoleerde verbonden buissystemen voor ondergrondse warm water leidingnetten - Hulpstukken samengesteld uit een stalen mediumvoerend hulpstuk met polyurethaanschuim als isolatiemateriaal en met een polyetheen buitenmantel
EN 736-1:1995	NEN-EN 736-1:1995	Afsluiters - Termen en definities - Deel 1: Definitie van de afsluitertypen
EN 12266-1:2003	NEN-EN 12266-1:2003	Industriële afsluiters - Beproeving van afsluiters - Deel 1: Beproevingen, beproevingsprocedures en acceptatiecriteria waaraan iedere afsluiter moet voldoen
EN 13941:2009+A1:2010	NEN-EN 13941:2009+A1:2010	Ontwerp en installatie van voor-geïsoleerde buissystemen voor stadsverwarming
EN 14419	NEN-EN 14419	Stadsverwarmingsbuizen - In de fabriek geïsoleerde buissystemen voor stadsverwarming - Bewakingssystemen

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 488

March 2011

ICS 23.060.01

Supersedes EN 488:2003

English Version

District heating pipes - Preinsulated bonded pipe systems for directly buried hot water networks - Steel valve assembly for steel service pipes, polyurethane thermal insulation and outer casing of polyethylene

Tuyaux de chauffage urbain - Systèmes bloqués de tuyaux préisolés pour les réseaux d'eau chaude enterrés directement - Robinets préisolés pour tubes de service en acier, isolation thermique en polyuréthane et tube de protection en polyéthylène

Fernwärmerohre - Werkmäßig gedämmte Verbundmantelsysteme für direkt erdverlegte Fernwärmenetze - Vorgedämmte Absperrarmaturen für Stahlmediumrohre mit Polyurethan-Wärmedämmung und Außenmantel aus Polyethylen

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EUROPÄISCHES KOMITEE FÜR NORMUNG

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Ref. No. EN 488:2011: E

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Foreword

This document (EN 488:2011) has been prepared by Technical Committee CEN/TC 107 “Prefabricated district heating pipe systems”, the secretariat of which is held by DS.

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 September 2011, and conflicting national standards shall be withdrawn at the latest by September 2011.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN 488:2003.

Annex A is informative, Annexes B and C are normative.

This document includes a Bibliography.

The first edition of EN 488 was approved in 1994. The first revised standard was published in 2003. In this second revision, in general the whole standard has been edited to make it more readable. Requirements and test methods have been separated; therefore, clause numbers have changed and some clauses have been split up in several clauses. Exact references for changes are not always possible. The main areas of the current revision are:

a) The scope has been amended. The standard applies no longer only to insulated valve assemblies for continuous operation with hot water at various temperatures in accordance with EN 253:2009, Clause 1 but also to the valve assemblies with a maximum operation pressure of 25 bar. For higher pressure, additional demands apply. It is also explained that the calculation rules of loads and stresses are not included. They depend on the configuration of the system as it is installed. The design and installation rules are given in EN 13941:2009+A1:2010.

b) In Clause 3, "terms and definitions", definitions for the nominal pressure (PN), nominal size (DN) and maximum operation pressure have been added. A figure "Example valve assembly components" of a valve assembly, its components and definitions has been added.

c) Clause 4, "requirements"

   1) material of the steel parts in the pressurized parts of the valve shall be certified in accordance with EN 10204, the 3.1 certificate (4.3.1);

   2) it is added that flanged or screwed connections, except sealing system at the stem, shall not be used except in the non-pressurized area e.g. for the stem extensions (4.3.2);

   3) the requirements for the use of stop devices are amended (4.7);

   4) the minimum water temperature has been adjusted to 4 ºC (4.2);

   5) 4.3.5 "Welding of steel parts" has been changed and adjusted to EN 13941:2009+A1:2010 and the text in EN 448;

   6) 4.1.6 has become 4.8 “resistance to axial forces bending moments” and has been rewritten in Annex B;

   7) additions have been made to the requirements to the corrosion protection of the stem (see 4.6);

8) the Clause "increase in diameter" has been changed to "diameter and wall thickness of the casing" (see 4.4.3);

9) a table with the tolerances of the main dimensions has been added together with a figure to explain the dimensions (see 4.6.3);

10) a clause was added about the installation of measuring elements for surveillance (see 4.6.4).

d) Clause 5, "test methods"

1) the clause "Testing, test methods and test requirements" has been adjusted to make the order of test clearer;

2) a test for the surveillance system is added (see 5.7).

e) Clause 6, "marking"

1) for the steel valve pressure and temperature and marking with closed and open position;

2) for the casing the date of manufacture has been changed to year and week of manufacture (see 6.3);

3) for the valve assembly, the type of blowing agent and diffusion barrier has been added (see 6.4).

f) Annex A, "guidelines for inspection and testing"

1) the clause about quality surveillance had been changed in quality control (see A.3);

2) a table for the valve assembly inspection had been added.

g) Former Annex B, the guidelines for installation of the valves has been deleted. New Annexes B and C have been added, in which the actual testing is included.

h) The former Table 1, “Service pipe dimensions and test forces” has been changed due to cold laying conditions. Therefore, the compressive forces have been adapted. In this table the maximum allowable bending moments have been included and the table has been moved to Annex B.

i) A description of the test method for bending forces has been added in Annex C.

In general, references were changed were needed. If possible references to European standards were used.

For information on the minimum expected thermal life with operation at various temperatures with respect to PUR foam performance see EN 253.

The other standards from CEN/TC 107 covering this subject are:

— EN 253, *District heating pipes — Preinsulated bonded pipe systems for directly buried hot water networks — Pipe assembly of steel service pipe, polyurethane thermal insulation and outer casing of polyethylene;*

— EN 448*, District heating pipes — Preinsulated bonded pipe systems for directly buried hot water networks — Fitting assemblies of steel service pipes, polyurethane thermal insulation and outer casing of polyethylene;*

— EN 489, *District heating pipes — Preinsulated bonded pipe systems for directly buried hot water networks — Joint assembly for steel service pipes, polyurethane thermal insulation and outer casing of polyethylene;*

Bestelformulier

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