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Clamp type coupling assemblies for use with steam hoses rated for pressures up to 18 bar

EESTI STANDARDI EESSÕNA

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ICS 23.040.70

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EUROPEAN STANDARD

EN 14423:2013+A2

NORME EUROPÉENNE

EUROPÄISCHE NORM

May 2019

ICS 23.040.70

Supersedes EN 14423:2013+A1:2016

English Version

Clamp type coupling assemblies for use with steam hoses rated for pressures up to 18 bar

Raccords avec colliers de serrage pour tuyaux à vapeur
utilisant une pression jusqu'à 18 bar

Schlaucharmaturen mit Klemmfassung für Dampf bis
18 bar

This European Standard was approved by CEN on 13 June 2016 and includes Amendment 2 approved by CEN on 15 January 2019.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
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European foreword

This document (EN 14423:2013+A2:2019) has been prepared by Technical Committee CEN/TC 218 “Rubber and plastics hoses and hose assemblies”, the secretariat of which is held by BSI.

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of an identical text or by endorsement, at the latest by November 2019, and conflicting national standards shall be withdrawn at the latest by November 2019.

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 includes Amendment 1, approved by CEN on 13 June 2016 and Amendment 2, approved by CEN on 15 January 2019.

This document supersedes ^{A2} EN 14423:2013+A1:2016 ^{A2}.

The start and finish of text introduced or altered by amendment is indicated in the text by tags ^{A1} ^{A1} and ^{A2} ^{A2}.

In comparison to EN 14423:2004, the following changes have been made:

- In Clause 2, the normative references have been updated.
- Clause 3 “Terms and definitions” has been amended.
- The term “seals” has been replaced by “gaskets” (main gasket/thread gasket).
- Restrictions on nominal size DN 32 have been deleted.
- In 9.1, 9.2, 9.3 and 9.8, the material lists have been revised.
- In Clause 10, the requirements for marking of hose fittings and union nuts have been revised.
- Clause 11 “Type testing and quality control” has been restructured and amended.
- The Bibliography has been reviewed.
- The standard has been revised editorially.

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

1 Scope

This European Standard specifies the design, materials and dimensions of fittings for clamp type coupling assemblies for use with nominal sizes DN 15 to DN 50 steam and hot water hoses. It covers assemblies up to a maximum working pressure of 18 bar¹⁾ (corresponding to a saturated steam temperature of 210 °C).

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 10025-2, *Hot rolled products of structural steels — Part 2: Technical delivery conditions for non-alloy structural steels*

EN 10087, *Free-cutting steels — Technical delivery conditions for semi-finished products, hot-rolled bars and rods*

EN 10088-1, *Stainless steels — Part 1: List of stainless steels*

EN 10088-2, *Stainless steels — Part 2: Technical delivery conditions for sheet/plate and strip of corrosion resisting steels for general purposes*

EN 10213, *Steel castings for pressure purposes*

EN 10226-1, *Pipe threads where pressure tight joints are made on the threads — Part 1: Taper external threads and parallel internal threads — Dimensions, tolerances and designation*

EN 10283, *Corrosion resistant steel castings*

EN 12164, *Copper and copper alloys — Rod for free machining purposes*

EN 12168, *Copper and copper alloys — Hollow rod for free machining purposes*

EN 12420, *Copper and copper alloys — Forgings*

EN ISO 898-2, *Mechanical properties of fasteners made of carbon steel and alloy steel — Part 2: Nuts with specified property classes — Coarse thread and fine pitch thread (ISO 898-2)*

EN 22768-1:1993, *General tolerances — Part 1: Tolerances for linear and angular dimensions without individual tolerance indications (ISO 2768-1:1989)*

EN 22768-2:1993, *General tolerances — Part 2: Geometrical tolerances for features without individual tolerance indications (ISO 2768-2:1989)*

EN ISO 228-1, *Pipe threads where pressure tight joints are not made on the threads — Part 1: Dimensions, tolerances and designation (ISO 228-1)*

EN ISO 898-1, *Mechanical properties of fasteners made of carbon steel and alloy steel — Part 1: Bolts, screws and studs with specified property classes — Coarse thread and fine pitch thread (ISO 898-1)*

EN ISO 3506-1, *Mechanical properties of corrosion-resistant stainless steel fasteners — Part 1: Bolts, screws and studs (ISO 3506-1)*

1) 1 bar = 0,1 MPa.

EN ISO 3506-2, *Mechanical properties of corrosion-resistant stainless steel fasteners — Part 2: Nuts (ISO 3506-2)*

EN ISO 4032, *Hexagon regular nuts (style 1) — Product grades A and B (ISO 4032)*

EN ISO 4042, *Fasteners — Electroplated coatings (ISO 4042)*

EN ISO 4762, *Hexagon socket head cap screws (ISO 4762)*

EN ISO 8330, *Rubber and plastics hoses and hose assemblies — Vocabulary (ISO 8330)*

EN ISO 15607, *Specification and qualification of welding procedures for metallic materials — General rules (ISO 15607)*

ISO 2859-1, *Sampling procedures for inspection by attributes — Part 1: Sampling schemes indexed by acceptable quality limit (AQL) for lot-by-lot inspection*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN ISO 8330 and the following apply.

3.1

DN (nominal size)

alphanumeric designation of size for components of a pipework system, which is used for reference purposes., which comprises the letters DN followed by a dimensionless whole number which is indirectly related to the physical size, in millimetres, of the bore or outside diameter of the end connections

Note 1 to entry: The number following the letters DN does not represent a measurable value and should not be used for calculation purposes except where specified in the relevant standard.

Note 2 to entry: In those standards which use the DN designation system, any relationship between DN and component dimensions should be given, e.g. DN/OD or DN/ID.

[SOURCE: EN ISO 6708:1995, 2.1]

3.2

PN

alphanumeric designation which is used for reference purposes related to a combination of mechanical and dimensional characteristics of a component of a hose fitting and which comprises the letters PN followed by a dimensionless number

Note 1 to entry: The number following the letters PN does not represent a measurable value and should not be used for calculation purposes except where specified in the relevant standard.

3.3

arithmetical mean deviation of the assessed profile

Ra

arithmetic mean of the absolute ordinate values $Z(x)$ within a sampling length:

$$Ra = \frac{1}{lr} \int_0^{lr} |Z(x)| dx$$

[SOURCE: EN ISO 4287:1998²⁾, 4.2.1]

2) This document is currently impacted by the corrigendum EN ISO 4287:1998/AC:2008 and the draft amendment EN ISO 4287:1998/A1:2009.