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Refrigerating systems and heat pumps - Qualification of tightness of components and joints

I.S. EN 16084:2011

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Refrigerating systems and heat pumps - Qualification of tightness of components and joints

Systèmes de réfrigération et pompes à chaleur -
Qualification de l'étanchéité des composants et des joints

Kälteanlagen und Wärmepumpen - Qualifizierung der
Dichtheit der Bauteile und Verbindungen

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Foreword

This document (EN 16084:2011) has been prepared by Technical Committee CEN/TC 182 “Refrigerating systems, safety and environmental requirements”, 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of an identical text or by endorsement, at the latest by October 2011, and conflicting national standards shall be withdrawn at the latest by October 2011.

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1 Scope

This European Standard is intended to describe the qualification procedure for type approval of the tightness of hermetically sealed and closed components, joints and parts used in refrigerating systems and heat pumps as described in EN 378. The sealed and closed components, joints and parts concerned are, in particular, fittings, bursting discs, flanged or fitted assemblies. The tightness of flexible piping made from non-metallic materials is dealt with in EN 1736. Metal flexible piping are covered by this standard.

The requirements contained in this document are applicable to joints of maximum DN 50 and components of internal volume of maximum 5 l and maximum weight of 50 kg.

This document is intended to characterise their tightness stresses met during their operations, following the fitting procedure specified by the manufacturer, and to specify the minimal list of necessary information to be provided by the supplier of a component to the person in charge of carrying out this procedure.

It specifies the level of tightness of the component, as a whole, and its assembly as specified by its manufacturer.

It applies to the hermetically sealed and closed components, joints and parts used in the refrigerating installations, including those with seals, whatever their material and their design are.

This European Standard specifies additional requirements for mechanical joints that can be recognised as hermetically sealed joints.

2 Normative references

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

EN 378-1:2008, *Refrigerating systems and heat pumps — Safety and environmental requirements — Part 1: Basic requirements, definitions, classification and selection criteria*

EN 1330-8:1998, *Non-destructive testing — Terminology — Part 8: Terms used in leak tightness testing*

EN 1593, *Non-destructive testing — Leak testing — Bubble emission techniques*

EN 1736, *Refrigerating systems and heat pumps — Flexible pipe elements, vibration isolators, expansion joints and non-metallic tubes — Requirements, design and installation*

EN 12284, *Refrigerating systems and heat pumps — Valves — Requirements, testing and marking*

EN 12693, *Refrigerating systems and heat pumps — Safety and environmental requirements — Positive displacement refrigerant compressors*

EN 13134, *Brazing — Procedure approval*

EN 13185:2001, *Non-destructive testing — Leak testing — Tracer gas method*

EN 60068-2-6, *Environmental testing — Part 2-6: Tests — Tests Fc: Vibration (sinusoidal) (IEC 60068-2-6:2007)*

EN 60068-2-64, *Environmental testing — Part 2-64: Tests — Test Fh: Vibration, broadband random and guidance (IEC 60068-2-64:2008)*

EN 60335-2-34, *Household and similar electrical appliances — Safety — Part 2-34: Particular requirements for motor-compressors (IEC 60335-2-34:2002)*

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