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IRISH STANDARD

I.S. EN 12094-5:2006

ICS 13.220.20

FIXED FIREFIGHTING SYSTEMS - COMPONENTS FOR GAS EXTINGUISHING SYSTEMS - PART 5: REQUIREMENTS AND TEST METHODS FOR HIGH AND LOW PRESSURE SELECTOR VALVES AND THEIR ACTUATORS

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EUROPEAN STANDARD

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EN 12094-5

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Fixed firefighting systems - Components for gas extinguishing systems - Part 5: Requirements and test methods for high and low pressure selector valves and their actuators

Installations fixes de lutte contre l'incendie - Éléments constitutifs des installations d'extinction à gaz - Partie 5: Exigences et méthodes d'essai pour vannes directionnelles haute et basse pression et leurs déclencheurs

Ortsfeste Brandbekämpfungsanlagen - Bauteile für Löschanlagen mit gasförmigen Löschmitteln - Teil 5: Anforderungen und Prüfverfahren für Hoch- und Niederdruck-Bereichsventile und zugehörige Auslöseeinrichtungen

This European Standard was approved by CEN on 9 March 2006.

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This European Standard exists 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 Central Secretariat has the same status as the official versions.

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Foreword

This European Standard (EN 12094-5:2006) has been prepared by Technical Committee CEN/TC 191 “Fixed firefighting systems”, 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of an identical text or by endorsement, at the latest by October 2006, and conflicting national standards shall be withdrawn at the latest by April 2009.

This European Standard supersedes EN 12094-5:2000.

This European Standard has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

For relationship with EU Directive(s), see informative Annex ZA, which is an integral part of this European Standard.

This European Standard is part of a series concerned with gas extinguishing system components.

The following European Standards are planned to cover:

— gas extinguishing systems (EN 12094),

— sprinkler systems (EN 12259 and EN 12845),

— powder systems (EN 12416),

— explosion protection systems (EN 26184),

— foam systems (EN 13565),

— hose systems (EN 671),

— smoke and heat control systems (EN 12101),

— water spray systems (EN 14816).

This standard has the general title “Fixed firefighting systems – Components for gas extinguishing systems” and will consist of the following parts:

— Part 1: Requirements and test methods for electrical automatic control and delay devices,

— Part 2: Requirements and test methods for non-electrical automatic control and delay devices,

— Part 3: Requirements and test methods for manual triggering and stop devices,

— Part 4: Requirements and test methods for container valve assemblies and their actuators,

— Part 5: Requirements and test methods for high and low pressure selector valves and their actuators,

— Part 6: Requirements and test methods for non-electrical disable devices,

— Part 7: Requirements and test methods for nozzles for CO_2 systems,

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— Part 8: Requirements and test methods for connectors,

— Part 9: Requirements and test methods for special fire detectors,

— Part 10: Requirements and test methods for pressure gauges and pressure switches,

— Part 11: Requirements and test methods for mechanical weighing devices,

— Part 12: Requirements and test methods for pneumatic alarm devices,

— Part 13: Requirements and test methods for check valves and non-return valves,

— Part 16: Requirements and test methods for odorizing devices for CO_2 low pressure systems,

— Part 20: Requirements and test methods for the compatibility of components.

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

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Introduction

It has been assumed in the preparation of this European Standard that the execution of its provisions is entrusted to appropriately qualified and experienced people.

All pressure data in this European Standard are given as gauge pressures in bar, unless otherwise stated.

NOTE 1 bar = 10^5 N m^{-2} = 100 kPa.

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1 Scope

This European Standard specifies requirements and describes test methods for selector valves and their actuators used in CO_2 -, Inert Gas- or Halocarbon gas fire extinguishing systems.

2 Normative references

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

EN 60068-2-6:1995, *Environmental testing — Part 2: Tests — Tests Fc: Vibration (sinusoidal) (IEC 60068-2-6:1995 + Corrigendum 1995)*

EN ISO 9001:2000, *Quality management systems — Requirements (ISO 9001:2000)*

3 Terms and definitions

For the purposes of this European Standard, the following terms and definitions apply.

3.1
actuator
component which causes a valve to operate

3.2
closing time
time for the sealing device of the valve to move from its fully open position to its fully closed position

3.3
CO_2-high-pressure installation
fire extinguishing installation in which the CO_2 is stored at ambient temperature. For example, the pressure of the CO_2 in storage is p_{abs} = 58,6 bar at 21 °C

3.4
CO_2-low-pressure installation
fire extinguishing installation in which the CO_2 is stored at low temperature, normally -19 °C to -21 °C

3.5
fill ratio
mass of extinguishing medium related to the net capacity of a container expressed as kilograms per litre (kg/l)

3.6
Halocarbon Gas
extinguishing agent that contains as primary components one or more organic compounds containing one or more of the elements fluorine, chlorine, bromine or iodine

3.7
Halocarbon Gas installation
fire extinguishing installation in which the Halocarbon Gas is stored at ambient temperature

3.8
Inert Gas
non liquefied gas or mixture of gases which extinguish the fire mainly by reducing the oxygen-concentration in the protected zone, such as Argon, Nitrogen or mixtures of these gases with CO_2

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