TECHNICAL SPECIFICATION

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# CEN/TS 14972

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English Version

# Fixed firefighting systems - Watermist systems - Design and installation

Installations fixes de lutte contre l'incendie - Systèmes à brouillard d'eau - Conception et installation

Ortsfeste Brandbekämpfungsanlagen - Feinsprüh-Löschanlagen - Planung und Einbau

This Technical Specification (CEN/TS) was approved by CEN on 28 September 2010 for provisional application.

The period of validity of this CEN/TS is limited initially to three years. After two years the members of CEN will be requested to submit their comments, particularly on the question whether the CEN/TS can be converted into a European Standard.

CEN members are required to announce the existence of this CEN/TS in the same way as for an EN and to make the CEN/TS available promptly at national level in an appropriate form. It is permissible to keep conflicting national standards in force (in parallel to the CEN/TS) until the final decision about the possible conversion of the CEN/TS into an EN is reached.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
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## Foreword

This document (CEN/TS 14972:2011) has been prepared by Technical Committee CEN/TC 191 “Fixed firefighting systems”, the secretariat of which is held by BSI.

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 CEN/TS 14972:2008.

This Technical Specification (TS) was adopted by CEN for which there is the future possibility of agreement on a European Standard, but for which at present:

— the required support for approval as a European Standard cannot be obtained;

— there is doubt on whether consensus has been achieved;

— the subject matter is still under technical development.

This Technical Specification is established with a view to serving, for instance, the purpose of:

— publishing aspects of a subject which may support the development and progress of the European market;

— giving guidance to the market on or by specifications and related test methods;

— providing specifications in experimental circumstances and/or evolving technologies.

The CEN members are requested to submit their comments and experiences with the use of these requirements and recommendations to the Secretariat of the responsible Technical Committee CEN/TC 191.

CEN/TC 14972:2008 was reviewed and replaced with this new edition.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to announce this Technical Specification: Austria, Belgium, Bulgaria, Croatia, 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 the United Kingdom.

# Introduction

The main purpose of this document is to provide information about the minimum requirements on watermist systems.

This document describes a series of specific test conditions to set out criteria capable of verifying performance claims of watermist systems, classify and determine the extent of their suitability for intended applications, whilst setting a minimum level of acceptable performance and/or safety.

As individual watermist applications have varied requirements and duty, this document is intended to apply to both skidded stand alone and pumped systems. It is the approving authority's responsibility to assess and implement the design manual of specific watermist systems against the tests set out in this document.

## 1 Scope

This Technical Specification specifies minimum requirements and gives information on design, installation and testing and gives criteria for the acceptance of fixed landbased watermist systems for specific hazards and provides fire test protocols for a variety of hazard groups.

The requirements are not valid for watermist systems on ships, in aircraft, on vehicles and mobile fire appliances or for below ground systems in the mining industry.

Aspects of watermist associated with explosion protection are beyond the scope of this document.

The fire tests in this document apply to the applications as described in Annex A. Extrapolation is not covered.

The document is not a universal design manual for watermist systems, as different systems have different characteristics and hence follow different design criteria to satisfy their duty requirements.

In the absence of a generalized design method, it is the intent of this document that watermist systems are full-scale fire tested and its system component evaluations are conducted by qualified testing laboratories.

The full system acceptance requires the relevant fire test report, the component test report(s) as well as manufacturer's design, installation, operation and maintenance manual for the application.

If the gas in the system is a significant factor for extinguishment/suppression, the relevant parts of EN 12094 and EN 15004-1 are applicable.

Firefighting systems in accordance with EN 12845 and water spray systems are not covered.

## 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 54 (all parts), *Fire detection and fire alarm systems*

EN 12094 (all parts), *Fixed firefighting systems — Components for gas extinguishing systems*

EN 12259 (all parts), *Fixed firefighting systems — Components for sprinkler and water spray systems*

EN 12845:2004+A2:2009, *Fixed firefighting systems — Automatic sprinkler systems — Design, installation and maintenance*

EN 13501-1:2007, *Fire classification of construction products and building elements — Part 1: Classification using test data from reaction to fire tests*

EN 15004-1, *Fixed firefighting systems — Gas extinguishing systems — Part 1: Design, installation and maintenance (ISO 14520-1:2006, modified)*

ISO 5660-1, *Reaction-to-fire tests — Heat release, smoke production and mass loss rate — Part 1: Heat release rate (cone calorimeter method)*

ISO 6182-11, *Fire protection — Automatic sprinkler systems — Part 11: Requirements and test methods for pipe hangers*

ISO 6182-12, *Fire protection — Automatic sprinkler systems — Part 12: Requirements and test methods for grooved-end components for steel pipe systems*