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Fixed firefighting systems - Condensed aerosol extinguishing systems - Part 1: Requirements and test methods for components

Installations fixes de lutte contre l'incendie - Systèmes d'extinction à aérosol - Partie 1 : Exigences et méthodes d'essais pour les éléments constitutifs

Ortsfeste Brandbekämpfungsanlagen - Löschanlagen für kondensierte Aerosole - Teil 1: Anforderungen und Prüfverfahren für Bauteile

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Foreword

This document (CEN/TR 15276-1:2009) has been prepared by Technical Committee CEN/TC 191 “Fixed firefighting systems”, the secretariat of which is held by BSI.

This document has the general title *Fixed fire-fighting systems – Condensed aerosol extinguishing systems* and will consist of the following parts:

— Part 1: *Requirements and test methods for components;*

— Part 2: *Design, installation and maintenance*.

Introduction

It has been assumed in the preparation of this document that the execution of its provisions is entrusted to appropriately qualified and experienced people in the specification, design, installation, testing, approval, inspection, operation and maintenance of systems and equipment, for whose guidance it has been prepared, and who can be expected to exercise a duty of care to avoid unnecessary release of extinguishant.

Product certification: Users of this document are advised to consider the desirability of independent certification of product conformity with this document based on testing and continuing surveillance, which may be coupled with assessment of manufacturer quality systems against EN ISO 9001.

Fire-fighting systems covered in this document are designed to provide a supply of fixed condensed aerosol extinguishing medium to extinguish fire.

The requirements of this document are made in the light of the best technical data known to the working group at the time of writing but, since a wide field is covered, it has been impracticable to consider every possible factor or circumstance that might affect implementation of the requirements.

It is important that the fire protection of a building or plant be considered as a whole. Aerosol extinguishant systems form only a part, though an important part, of the available facilities, but it should not be assumed that their adoption necessarily removes the need to consider supplementary measures, such as the provision of portable fire extinguishers or other mobile appliances for first aid or emergency use, or to deal with special hazards.

Aerosol extinguishants have been recognized as effective media for the extinction of Class A fires (solid surface burning fires) and Class B and Class C fires according to EN 2, but it should not be forgotten, in the planning of comprehensive schemes, that there may be hazards for which these mediums are not suitable, or that in certain circumstances or situations there may be dangers in their use requiring special precautions.

Advice on these matters can be obtained from the appropriate manufacturer of the aerosol generators or the extinguishing system. Information may also be sought from the appropriate fire authority, the health and safety authorities and insurers. In addition, reference should be made as necessary to other national standards and statutory regulations.

It is essential that fire-fighting equipment be carefully maintained to ensure instant readiness when required. Routine maintenance is liable to be overlooked or given insufficient attention by the owner of the system. It is, however, neglected at peril to the lives of occupants of the premises and at the risk of crippling financial loss. The importance of maintenance cannot be too highly emphasised.

Condensed aerosol may contain traces of toxic substances like those produced by a fire, and will obscure vision like smoke from fire.

1 Scope

This document specifies requirements, describes test methods for condensed aerosol extinguishing components and covers solely condensed aerosols.

This document is not intended to indicate approval of the extinguishants listed herein by the appropriate authorities, as other extinguishants may be equally acceptable.

This document is intended as a standard covering solely condensed aerosol.

The condensed aerosol generator typically consists of the following main components:

a) solid aerosol-forming compound;

b) cooling mechanism;

c) ignition device(s);

d) end plate discharge outlet(s);

e) housing;

f) mounting bracket.

This document does not cover dispersed aerosols.

This document requires, as a precaution, that the room is evacuated and sealed off whenever a generator is activated. Precautions include evacuation of the proximity area, criteria for re-entering and other safeguards as stated in Clause 5 of CEN/TR 15276-2:2009.

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 316, *Wood fibreboards – Definition, classification and symbols*

EN 622 (all parts*), Fibreboards – Specifications*

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

EN 60068-2-30, *Environmental testing – Part 2-30: Tests – Test Db: Damp Heat, cyclic (12 h + 12 h cycle) (IEC 60068-2-30:2005)*

ISO 209, *Aluminium and aluminium alloys – Chemical composition*

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