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ILNAS-EN 16750:2017+A1:2020

Fixed firefighting systems - Oxygen reduction systems - Design, installation, planning and maintenance

Installations fixes de lutte contre l'incendie - Systèmes d'appauvrissement en oxygène - Conception, installation, planification et maintenance

Ortsfeste Löschanlagen - Sauerstoffreduktionsanlagen - Auslegung, Einbau, Planung und Instandhaltung

08/2020

National Foreword

This European Standard EN 16750:2017+A1:2020 was adopted as Luxembourgish Standard ILNAS-EN 16750:2017+A1:2020.

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Fixed firefighting systems - Oxygen reduction systems - Design, installation, planning and maintenance

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Ortsfeste Löschanlagen - Sauerstoffreduktionsanlagen - Auslegung, Einbau, Planung und Instandhaltung

This European Standard was approved by CEN on 9 July 2017 and includes Amendment 1 approved by CEN on 12 July 2020.

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European foreword

This document (EN 16750:2017+A1:2020) 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of an identical text or by endorsement, at the latest by February 2021, and conflicting national standards shall be withdrawn at the latest by February 2021.

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 supersedes [A1⟩ EN 16750:2017 ⟨A1].

This document includes Amendment 1 approved by CEN on 12 July 2020.

The start and finish of text introduced or altered by amendment is indicated in the text by tags [A1⟩ ⟨A1].

According to the CEN-CENELEC Internal Regulations, the national standards organisations of the following countries are bound to implement this European Standard: 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, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

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Introduction

Oxygen reduction systems are designed to prevent fires from starting or spreading, by means of the introduction of oxygen reduced air. Oxygen reduction systems are not designed to extinguish fires. The design and installation shall be based on detailed knowledge of the protected area, its occupancy and the materials in question. It is important to suit the fire protection measures to the hazard as a whole.

It is important to emphasize that across the European Union there are several regulatory and legislative limitations for access and working in areas with lower oxygen concentration, so it is important to take these limitations into account. Use of this European Standard can vary based on the national legislation in each country of the European Union.

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1 Scope

This European standard specifies oxygen reduction systems that are used as fire prevention systems by creating an atmosphere in an area which is having a lower permanent oxygen concentration as in ambient conditions. The level of oxygen reduction is defined by the individual risks of these areas (see Annex A). Oxygen reduction is achieved by technical systems which are providing a flux of air containing a reduced concentration of oxygen.

This European standard specifies minimum requirements and defines the specifications governing the design, installation and maintenance of fixed oxygen reduction systems with oxygen reduced air in buildings and industrial production plants. The standard also applies to the extension and modification of existing systems.

This European standard applies to oxygen reduction systems using nitrogen which are designed for continual oxygen reduction in enclosed spaces.

NOTE Nitrogen is today the most suitable gas to be used for oxygen reduction. For other gases this European standard can be used as basis.

This European standard does not apply to oxygen reduction systems that use water mist or combustion gases.

The European standard does not apply to:

— explosion suppression systems;

— explosion prevention systems;

— fire extinguishing systems using gaseous extinguishing agents;

— inertization of portable containers;

— systems in which oxygen levels are reduced for reasons other than fire prevention (e.g. steel processing in the presence of inert gas to avoid the formation of oxide film);

— inerting required during repair work on systems or equipment (e.g. welding) in order to eliminate the risk of fire or explosion.

In addition to the conditions for the actual oxygen reduction system and its individual components this European standard also covers certain structural specifications for the protected area.

The space protected by an oxygen reduction system is a controlled and continuously monitored indoor climate for extended occupation. This standard does not cover unventilated confined spaces that may contain hazardous gases.