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Fire resistance tests for service installations - Part 10: Smoke control dampers

Feuerwiderstandsprüfungen für Installationen - Teil 10: Entrauchungsklappen

Essais de résistance au feu des installations techniques - Partie 10: Volets de désenfumage

Ta slovenski standard je istoveten z: FprEN 1366-10

ICS:

13.220.50	Požarna odpornost gradbenih materialov in elementov	Fire-resistance of building materials and elements
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Fire resistance tests for service installations - Part 10: Smoke control dampers

Essais de résistance au feu des installations techniques -
Partie 10: Volets de désenfumage

Feuerwiderstandsprüfungen für Installationen - Teil 10:
Entrauchungsklappen

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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Foreword

This document (FprEN 1366-10:2010) has been prepared by Technical Committee CEN/TC 127 “Fire safety in buildings”, the secretariat of which is held by BSI.

This document is currently submitted to the Unique Acceptance Procedure.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of Council Directive 89/106/EEC.

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.

EN 1366 ‘Fire resistance tests for service installations’ consists of the following

Part 1: Ducts

Part 2: Fire dampers

Part 3: Penetration seals

Part 4: Linear joint seals

Part 5: Service ducts and shafts

Part 6: Raised access and hollow core floors

Part 7: Conveyor systems and their closures

Part 8: Smoke extraction ducts

Part 9: Single compartment smoke extraction ducts

Part 10: Smoke control dampers

Part 11: Fire protective systems for essential services (in course of preparation)

FprEN 1366-10:2010 (E)**Introduction**

When smoke and heat exhaust ventilation is being considered, it becomes apparent that a clear path needs to be made between the area where heat and smoke is being generated (the fire) and the outside of the building.

To create this path there need to be ducts and the smoke extract path needs to remain uninterrupted. This means that dampers at the fire have to be open and remain open. Dampers along the path need to be open and remain open. Dampers at branches, or on the surface of the duct, along the path need to be closed and remain closed. In fact, if the duct crosses a compartment boundary it becomes part of the fire compartment in which the fire started.

The purpose of this European Standard is to define test methods to evaluate the abilities of smoke control dampers to

- 1) be applicable to single compartment and/or multi compartment fire resisting applications;
- 2) be applicable to automatic systems or systems with manual intervention;
- 3) change state from closed to open at elevated temperatures, and vice versa;
- 4) once opened maintain a defined cross sectional area at elevated temperature;
- 5) maintain a satisfactory leakage performance when subjected to positive pressure at elevated temperatures.

The units need to be mounted for the tests in a manner representative of practice.

Temperature and integrity measurements need to be carried out on various parts of the test construction during the test. Leakage measurements required need to be measured by direct flow measurement at the prescribed pressure differentials. Ambient leakage of the units needs also to be recorded.

Performance of these tests need to allow products to comply with prEN 12101-8 and be classified to EN 13501-4. The required temperatures, pressure differentials etc. are stated in prEN 12101-8.

Completing the tests within this European Standard does not ensure full compliance with prEN 12101-8, as other, additional, requirements are defined in prEN 12101-8. Some of these may be required to meet the classification requirements of EN 13501-4 as well.

Caution

The attention of all persons concerned with managing and carrying out this furnace testing is drawn to the fact that fire testing can be hazardous and that there is a possibility that toxic and/or harmful smoke and gases can be evolved during the test. Mechanical and operational hazards can also arise during the construction of the test elements or structures, their testing and disposal of test residues.

An assessment of all potential hazards and risks to health shall be made and safety precautions need to be identified and provided. Written safety instructions need to be issued. Appropriate training needs to be given to relevant personnel. Laboratory personnel needs to ensure that they follow written safety instructions at all times.