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Fire resistance tests — Fire dampers for air distribution systems —

Part 4: Test of thermal release mechanism

AMENDMENT 1: Specific performance requirement for thermal release mechanism based upon performance of thermal release mechanism used in ISO 10294-1 test specimen

Essai de résistance au feu — Clapets résistant au feu pour systèmes de distribution d'air —

Partie 4: Méthode d'essai du mécanisme de déclenchement thermique

AMENDEMENT 1: Exigence de performance spécifique du mécanisme de déclenchement thermique fondée sur le mécanisme de déclenchement thermique utilisé dans l'éprouvette d'essai de l'ISO 10294-1

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Foreword

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The committee responsible for this document is ISO/TC 92, *Fire safety*, Subcommittee SC 2, *Fire containment*.

Fire resistance tests — Fire dampers for air distribution systems —

Part 4:
Test of thermal release mechanism

AMENDMENT 1: Specific performance requirement for thermal release mechanism based upon performance of thermal release mechanism used in ISO 10294-1 test specimen

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Amendment adds new performance requirement for thermal release mechanism based upon performance of the thermal release mechanism used in ISO 10294 test specimen. The new requirement is contained in 4.2.2.1.

The amendment places the existing performance requirement for thermal release mechanisms in 4.2.2.2.

The amendment reorganizes 4.2 by adding subclauses.

The new material is underlined. Material being moved to a new location is represented by ~~strike through~~.

4.2 Response behaviour

4.2.1 Starting at an initial temperature of (25 ± 2) °C, the specimen shall be exposed to an increasing air temperature such that it follows the relationship (see Figure 3):

$T = (25 + 20t) \pm 2$

where

T is the temperature, in degrees Celsius;

t is the time from the start of the test period, in minutes.

~~*The response threshold of the thermal release mechanism shall not exceed an 80 °C rise above the starting temperature. A 25 °C initial temperature and 80 °C maximum temperature rise means that the maximum temperature of activation (threshold limit) will be 105 °C. This means that the thermal release mechanism shall operate within 4 min. This test may be applied to other operating temperatures and guidance is given Annex B.*~~

The mean air velocity at the start of this test shall be (1 ± 0,1) m/s. The test shall be performed three times for each orientation and location of the thermal release mechanism. The thermal release mechanism shall operate before the threshold limit is exceeded on each of the samples tested.

4.2.2 The response threshold of the thermal release mechanism shall not exceed:

4.2.2.1 The time equaling the average of the threshold time +10% determined from a minimum of three tests on thermal release mechanisms representative of the thermal release mechanism used in the ISO 10294-1 test specimen. A thermal release mechanism that has been previously tested to ISO 10294-1 fire damper test shall be used to determine a threshold response time. Three thermal release mechanisms, selected from a batch of five, shall be evaluated using the method described in this International Standard. The threshold response time shall be determined as the average response time of these three thermal release mechanism for each orientation required (see 6.1). Or

4.2.2.2 The time required for an 80 °C rise above the starting temperature. A 25 °C initial temperature and 80 °C maximum temperature rise means that the maximum temperature of activation (threshold limit) will be 105 °C. This means that the thermal release mechanism shall operate within 4 min. This test may be applied to other operating temperatures, and guidance is given in Annex B.

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