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Standards

Irish Standard
I.S. EN 16445:2013

Ventilation for buildings - Air diffusion - Aerodynamic testing and rating for mixed flow application: non-isothermal procedure for cold jet

I.S. EN 16445:2013

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NSAI
1 Swift Square,
Northwood, Santry
Dublin 9

T +353 1 807 3800
F +353 1 807 3838
E standards@nsai.ie
W NSAI.ie

Sales:
T +353 1 857 6730
F +353 1 857 6729
W standards.ie

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English Version

Ventilation for buildings - Air diffusion - Aerodynamic testing and rating for mixed flow application: non-isothermal procedure for cold jet

Ventilation des bâtiments - Bouches d'air - Essais
aérodynamiques et étalonnage pour applications de fluides
mixtes pour les essais non-isothermes pour jet froid

Lüftung von Gebäuden - Luftverteilung - Aerodynamische
Prüfung und Bewertung von Mischstromanwendungen:
Nicht-isothermes Verfahren für einen Kaltluftstrahl

This European Standard was approved by CEN on 8 December 2012.

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Foreword

This document (EN 16445:2013) has been prepared by Technical Committee CEN/TC 156 “Ventilation for buildings”, 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of an identical text or by endorsement, at the latest by August 2013, and conflicting national standards shall be withdrawn at the latest by August 2013.

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.

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1 Scope

This European Standard specifies methods for the laboratory aerodynamic testing and rating of air terminal devices for mixed flow applications, including the specification of suitable test facilities and measurement techniques. This standard applies to laboratory testing of ATD for technical characterisation.

The standard gives only tests for the assessment of characteristics of the air terminal devices for mixed flow applications, under non-isothermal conditions with a cold jet. It does not cover the testing of isothermal or low velocity terminal devices which are covered by other published standards.

This European Standard applies to ventilation or air conditioning systems designed for the maintenance of comfort conditions for buildings. It is not applicable in the case of systems for the control of industrial or other special process environments. In the latter case however, it may be referred to if the system technology is similar to that of the above mentioned ventilation and air conditioning systems.

The principles described in this European Standard can also be used on site or in a lab for full-scale measurements.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 12238, *Ventilation for buildings — Air terminal devices — Aerodynamic testing and rating for mixed flow application*

EN 12239, *Ventilation for buildings — Air terminal devices — Aerodynamic testing and rating for displacement flow applications*

EN 13182, *Ventilation for buildings — Instrumentation requirements for air velocity measurements in ventilated spaces*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply:

3.1

supply air

air entering a supply air terminal device from an upstream duct

3.2

exhaust air

air leaving an exhaust air terminal device into a downstream duct

3.3

local measured mean air velocity

measured value of local airstream velocity as described in EN 12238

3.4

treated space

enclosure served by an air distribution system; in this standard this is the test room

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