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Energy performance of buildings — Overall energy performance assessment procedures —

Part 2: Guideline for using indoor environmental input parameters for the design and assessment of energy performance of buildings

Performance énergétique des bâtiments — Modes opératoires d'évaluation de la performance énergétique globale —

Partie 2: Lignes directrices pour l'utilisation des paramètres d'entrée de l'environnement intérieur pour la conception et l'évaluation de la performance énergétique des bâtiments

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Contents

Page

Foreword ..... **v**

Introduction ..... **vi**

1 Scope **1**

2 Normative references **1**

3 Terms and definitions **1**

4 Symbols and abbreviated terms **2**
4.1 Symbols 2
4.2 Abbreviated terms 2

5 Interactions with other standards and use of categories **3**

6 How to establish design input criteria for dimensioning of buildings, heating, cooling, ventilation and lighting systems **3**
6.1 General 3
6.2 Thermal environment 4
6.2.1 General 4
6.2.2 Mechanically heated and/or cooled buildings 4
6.2.3 Buildings without mechanical cooling 5
6.2.4 Increased air velocity 7
6.3 Design for indoor air quality (ventilation rates) 7
6.3.1 General 7
6.3.2 Methods 8
6.3.3 Non-residential buildings 9
6.3.4 Residential buildings 9
6.3.5 Access to operable windows 10
6.3.6 Filtration and air cleaning 10
6.4 Humidity 11
6.5 Lighting 11
6.5.1 General 11
6.5.2 Non-residential buildings 11
6.5.3 Residential buildings 12
6.6 Noise 12

7 Indoor environment parameters for energy calculation **12**
7.1 General 12
7.2 Thermal environment 12
7.2.1 General 12
7.2.2 Seasonal and monthly calculations 12
7.2.3 Hourly calculations or dynamic building simulation 12
7.3 Indoor air quality and ventilation 13
7.3.1 General 13
7.3.2 Non-residential buildings 13
7.3.3 Residential buildings 13
7.4 Humidity 13
7.5 Lighting 13

8 Evaluation of the indoor environment and long-term indicators **13**
8.1 General 13
8.2 Design indicators 13
8.3 Calculated indicators of indoor environment 14
8.3.1 Simple indicator 14
8.3.2 Hourly criteria 14
8.3.3 Degree hours criteria 14
8.3.4 Overall thermal comfort criteria (weighted PMV criteria) 14
8.4 Measured indicators 14

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8.4.1 General 14
8.4.2 Thermal environment 15
8.4.3 Indoor air quality and ventilation 15
8.4.4 Lighting 15
8.4.5 Noise 15
8.5 Subjective evaluations 16
9 Inspections and measurement of the indoor environment in existing buildings 16
9.1 Measurements 16
9.1.1 General 16
9.1.2 Thermal environment 16
9.1.3 Indoor air quality 17
9.1.4 Indoor light quality measurements based on illuminance 18
10 Classification and certification of the indoor environment 18
10.1 General 18
10.2 Detailed classification and certification 18
10.3 Recommended overall evaluation of the indoor environment and certification 18
Annex A (informative) **Information about national annexes 19**
Annex B (informative) **Recommended criteria for the thermal environment 20**
Annex C (informative) **Basis for the criteria for indoor air quality and ventilation rates 25**
Annex D (informative) **Example on how to define low and very low polluting buildings 42**
Annex E (informative) **Examples of criteria for lighting 45**
Annex F (informative) **Indoor system noise criteria of some spaces and buildings 46**
Annex G (informative) **Occupants schedules for energy calculations 48**
Annex H (informative) **Long-term evaluation of the general thermal comfort conditions 54**
Annex I (informative) **Recommended criteria for acceptable deviations 56**
Annex J (informative) **Methodologies for subjective evaluations 59**
Annex K (informative) **Examples of classification and certification of the indoor environment 60**
Annex L (informative) **Recommended criteria for personalized systems 63**
Annex M (informative) **Recommended methods for substitute ventilation air by air cleaning 65**
Annex N (informative) **WHO criteria for health in the indoor environment 68**
Bibliography 69

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see the following URL: www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 163, *Thermal performance and energy use in the built environment*.

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Introduction

This document provides guidance to users in the application of ISO 17772-1 and gives additional background information. This document also describes and recommends additional topics related to the evaluation of the indoor environmental quality and new possibilities to improve the indoor environmental quality and reduce energy use of buildings like personalized systems, air cleaning technologies, consideration of adapted persons, etc.

This document explains how design criteria can be established and used for dimensioning of systems. It explains how to establish and define the main parameters to be used as input for building energy calculation and long-term evaluation of the indoor environment. This document also describes how gas phase air cleaning in the future can improve the indoor air quality and partly substitute for outside air. Finally, it identifies parameters to be used for monitoring and displaying of the indoor environment. Different categories of criteria can be used depending on type of building, type of occupants, type of climate and national differences. This document explains how these different categories of indoor environment can be individually selected as national criteria, be used in project agreement for design criteria and for displaying the yearly building performance in relation to indoor environmental quality. The designer can also define other categories using the principles from ISO 17772-1 and this document.

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Energy performance of buildings — Overall energy performance assessment procedures —

Part 2: Guideline for using indoor environmental input parameters for the design and assessment of energy performance of buildings

1 Scope

This document deals with the indoor environmental parameters for thermal environment, indoor air quality, lighting and acoustic. It explains how to use ISO 17772-1 for specifying indoor environmental input parameters for building system design and energy performance calculations.

This document:

— specifies methods for long-term evaluation of the indoor environment obtained as a result of calculations or measurements;

— specifies criteria for measurements which can be used if required to measure compliance by inspection;

— identifies parameters to be used by monitoring and displaying the indoor environment in existing buildings.

This document is applicable where the criteria for indoor environment are set by human occupancy and where the production or process does not have a major impact on indoor environment. It explains how different categories of criteria for the indoor environment can be used.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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.

ISO 13731, *Ergonomics of the thermal environment — Vocabulary and symbols*

ISO 17772-1, *Energy performance of buildings — Indoor environmental quality — Part 1: Indoor environmental input parameters for the design and assessment of energy performance of buildings*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 13731 and ISO 17772-1 apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— IEC Electropedia: available at http://www.electropedia.org/

— ISO Online browsing platform: available at https://www.iso.org/obp

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