Nederlandse

norm

NEN-EN-ISO 7933 (en)

Ergonomics of the thermal environment - Analytical determination and interpretation of heat stress using calculation of the predicted heat stain (ISO 7933:2004,IDT)

augustus 2004
ICS 13.180

Vervangt NEN-EN 12515:1997; NEN-ISO 7933:1990; NEN-EN-ISO 7933:2002 Ontw.

Als Nederlandse norm is aanvaard:
- EN ISO 7933:2004,IDT
- ISO 7933:2004,IDT

Normcommissie 302 005 "Ergonomie van de fysische werkomgeving"

NEN

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Postbus 5059, 2600 GB Delft
Telefoon (015) 2 690 390, Fax (015) 2 690 190

Nederlands voorwoord

Voor de in deze norm vermelde normatieve verwijzingen bestaan in Nederland de volgende equivalenten:

vermelde norm	Nederlandse norm	titel
ISO 7726	NEN-EN-ISO 7726	Ergonomie van de thermische omgeving - Instrumenten voor het meten van fysische grootheden (en)
ISO 8996	NEN-EN-ISO 8996	Ergonomie - Bepaling van de metabolische warmteproduktie (nl)
ISO 9886	NEN-EN-ISO 9886	Ergonomie - Beoordeling van thermische belasting met behulp van fysiologische metingen (en)
ISO 9920	NEN-EN-ISO 9920	Klimaatomstandigheden - Bepaling van de thermische isolatie en verdampingsweerstand van kleding (en)

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN ISO 7933

August 2004

ICS 13.180

Supersedes EN 12515:1997

English version

Ergonomics of the thermal environment - Analytical determination and interpretation of heat stress using calculation of the predicted heat strain (ISO 7933:2004)

Ergonomie des ambiances thermiques - Détermination analytique et interprétation de la contrainte thermique fondées sur le calcul de l'astreinte thermique prévisible (ISO 7933:2004)

Ergonomie der thermischen Umgebung - Analytische Bestimmung und Interpretation der Wärmebelastung durch Berechnung der vorhergesagten Wärmebeanspruchung (ISO 7933:2004)

This European Standard was approved by CEN on 8 August 2004.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Central Secretariat has the same status as the official versions.

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Management Centre: rue de Stassart, 36 B-1050 Brussels

Ref. No. EN ISO 7933:2004: E

Foreword

This document (EN ISO 7933:2004) has been prepared by Technical Committee ISO/TC 159 "Ergonomics" in collaboration with Technical Committee CEN/TC 122 "Ergonomics", the secretariat of which is held by DIN.

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 2005, and conflicting national standards shall be withdrawn at the latest by February 2005.

This document supersedes EN 12515:1997.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

Endorsement notice

The text of ISO 7933:2004 has been approved by CEN as EN ISO 7933:2004 without any modifications.

INTERNATIONAL STANDARD

ISO 7933

Second edition
2004-08-15

Ergonomics of the thermal environment — Analytical determination and interpretation of heat stress using calculation of the predicted heat strain

Ergonomie des ambiances thermiques — Détermination analytique et interprétation de la contrainte thermique fondées sur le calcul de l'astreinte thermique prévisible

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ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

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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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

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.

ISO 7933 was prepared by Technical Committee ISO/TC 159, *Ergonomics*, Subcommittee SC 5, *Ergonomics of the physical environment*.

This second edition cancels and replaces the first edition (ISO 7933:1989), which was based on the Required Sweat Rate index. In order to avoid any confusion and, as extensive modifications are brought to the prediction model, the name of the index has been changed to Predicted Heat Strain (PHS).

Introduction

Other International Standards of this series describe how the parameters influencing the human thermoregulation in a given environment must be estimated or quantified. Others specify how these parameters must be integrated in order to predict the degree of discomfort or the health risk in these environments. The present document was prepared to standardize the methods that occupational health specialists should use to approach a given problem and progressively collect the information needed to control or prevent the problem.

The method of computation and interpretation of thermal balance is based on the latest scientific information. Future improvements concerning the calculation of the different terms of the heat balance equation, or its interpretation, will be taken into account when they become available. In its present form, this method of assessment is not applicable to cases where special protective clothing (reflective clothing, active cooling and ventilation, impermeable, with personal protective equipment) is worn.

In addition, occupational health specialists are responsible for evaluating the risk encountered by a given individual, taking into consideration his specific characteristics that might differ from those of a standard subject. ISO 9886 describes how physiological parameters must be used to monitor the physiological behaviour of a particular subject and ISO 12894 describes how medical supervision must be organized.

Bestelformulier

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NEN Uitgeverij
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Antwoordnummer 10214
2600 WB Delft

NEN Uitgeverij

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2600 GB Delft

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