საქართველოს სტანდარტი

მანქანა-დანადგარებიდან რადიაციული გამოსხივების რისკების წარმოქმნის შეფასება და შემცირება - ნაწილი 3: რადიაციის დონის დაწევა შემცირებით და გამოკვლევით

> საქართველოს სტანდარტებისა და მეტროლოგიის ეროვნული სააგენტო თბილისი

სსტ ენ 12198-3:2002+A1:2008/2019

საინფორმაციო მონაცემები

- 1 **შემუშავებულია** საქართველოს სტანდარტების და მეტროლოგიის ეროვნული სააგენტოს სტანდარტების დეპარტამენტის მიერ
- 2 დამტკიცებულია და შემოღებულია სამოქმედოდ საქართველოს სტანდარტების და მეტროლოგიის ეროვნული სააგენტოს 2019 წლის 6 დეკემბრის № 98 განკარგულებით
- **3 მიღებულია გარეკანის თარგმნის მეთოდით** სტანდარტიზაციის ევროპული კომიტეტის სტანდარტი ენ 12198-3:2002+A1:2008 "მანქანა-დანადგარებიდან რადიაციული გამოსხივების რისკების წარმოქმნის შეფასება და შემცირება ნაწილი 3: რადიაციის დონის დაწევა შემცირებით და გამოკვლევით"

4 პირველად

5 რეგისტრირებულია საქართველოს სტანდარტების და მეტროლოგიის ეროვნული სააგენტოს რეესტრში: 2019 წლის 6 დეკემბერი №268-1.3-016546

დაუშვებელია წინამდებარე სტანდარტის სრული ან ნაწილობრივი კვლავწარმოება, ტირაჟირება და გავრცელება სსიპ საქართველოს სტანდარტებისა და მეტროლოგიის ეროვნული სააგენტოს ნებართვის გარეშე

EUROPEAN STANDARD NORME EUROPÉENNE EUROPÄISCHE NORM

EN 12198-3:2002+A1

August 2008

ICS 13.110; 13.280

Supersedes EN 12198-3:2002

English Version

Safety of machinery - Assessment and reduction of risks arising from radiation emitted by machinery - Part 3: Reduction of radiation by attenuation or screening

Sécurité des machines - Estimation et réduction des risques engendrés par les rayonnements émis par les machines - Partie 3: Réduction du rayonnement par atténuation ou par écrans

Sicherheit von Maschinen - Bewertung und Verminderung des Risikos der von Maschinen emittierten Strahlung - Teil 3: Verminderung der Strahlung durch Abschwächung oder Abschirmung

This European Standard was approved by CEN on 16 October 2002 and includes Amendment 1 approved by CEN on 18 July 2008.

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 CEN Management Centre 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 CEN Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.



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

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

Contents

Forew	ord	3
ntroduction4		
1	Scope	4
2	Normative references	
3	Terms and definitions	
4	Classification of radiation	
5	Procedure for reducing radiation emission levels by design	6
6	Strategy for design of shield	
6.1 6.2	Design target Characterization of all the radiation sources	
6.3	Radiation fields, beam geometry access and enclosure	7
6.4 6.5	Review available of attenuating material	
6.6	Design requirements	
6.7 6.8	Manufacture prototype Determination of the effectiveness of the shielding	
6.9 6.10	Compare with desired levels set in step 1 and if necessary, modify design	
Annex	ZA (informative) A Relationship between this European Standard and the Essential Requirements of EU Directive 98/37/EC	12
Annex	ZB (informative) ♠ Relationship between this European Standard and the Essential Requirements of EU Directive 2006/42/EC إِنَّا الْعَامِينَ الْعَلِينَ الْعَامِينَ الْعَلِينَ الْعَلِينَ الْعَلَيْكِينَ الْعَلِينَ الْعَلِينَ الْعَلِينَ الْعَلَيْكِينَ الْعَلَيْكِينَ الْعَلَيْكِينَ الْعِينَ الْعَلِينَ الْعَلَيْكِينَ الْعَلَيْكِينَ الْعَلَيْكِينَ الْعَلَيْكِينَ الْعُلِينَ الْعَلَيْكِينَ الْعَلَيْكِينَ الْعَلَيْكِينَ الْعَلِينَ الْعَلَيْكِينَ الْعَلَيْكِينَ الْعَلَيْكِينَ الْعَلَيْكِينَ الْعَلَيْكِينَ الْعَلَيْكِينَ الْعَلَيْكِينَ الْعَلَيْكِينَ الْعَلِينَ الْعَلَيْكِينَ الْعَلِيْكِينَ الْعَلِيْكِينَ الْعَلِينَ الْعَلِينَ الْعَلِينِ الْعَلِيْكِينَ الْعَلِينَ الْعَلِيْكِينَ الْعَلِينَ الْعَلِينَ الْعَلِينَ الْعَلِينَ الْعَلِينَ الْعَلِينَ الْعَلِينِ الْعَلِينِ الْعَلِينِ الْعَلِينِ الْعِلْمِينَ الْعَلِينَ الْعَلِينِينَ الْعَلِينِ الْعَلِينِ الْعَلِينِ الْعَلِينِ الْعَلِينِ الْعِلْمِينَ الْعِلْمِينَ الْعِلْمِينَ الْعِلْمِينَ الْعَلِينِ الْعَلِينِ الْعِلْمِينَ الْعِلْمِينَاكِينِ الْعِلْمِينَ الْعِلْمِينَ الْعِلْمِينَ الْعِلْمِينَ الْعِلْمِين	13

Foreword

This document (EN 12198-3:2002+A1:2008) has been prepared by Technical Committee CEN /TC 114 "Safety of machinery", 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 2009, and conflicting national standards shall be withdrawn at the latest by December 2009.

This document supersedes EN 12198-3:2002.

This document includes Amendment 1, approved by CEN on 2008-07-18.

The start and finish of text introduced or altered by amendment is indicated in the text by tags [A].

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 EC Directive(s).

For relationship with EC Directive(s), see informative Annexes ZA and ZB, which are integral parts of this document. (4)

This European Standard deals with the essential requirement "Radiation" (see EN 292-2:1991, annex A, paragraph 1.5.10).

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

Introduction

Machinery supplied by electrical power or containing radiation sources may emit radiation or generate electric and/or magnetic fields. The radiation emissions will vary in frequency and magnitude.

It does not deal with other strategies concerning reduction of radiation risk by substitution with a smaller source, increasing the distance or reducing exposure time.

This document is a type B standard as stated in EN 1070.

The provisions of this document may be supplemented or modified by a type C standard.

NOTE For machines which are covered by the scope of a type C standard and which have been designed and built according to the provisions of that standard, the provisions of that type C standard take precedence over the provisions of this type B standard.

1 Scope

The purpose of this European standard is to provide means to enable manufacturers of machinery concerned by a radiation hazard to design and manufacture efficient safeguards against radiations.

Specific technical details of the design of shields for the different types of radiation and machines will be provided in other standards.

This European standard applies to machinery as defined by EN 292.

Part 1 of this standard contains the general principles of risk assessment of radiation emission by machinery. Details of the measurement of the radiation emission are given in Part 2 of this standard.

This standard deals with a design strategy for reducing the radiation flux by attenuation or screening.

2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text, and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

EN 292-1:1991, Safety of machinery — Basic concepts, general principles for design — Part 1: Basic terminology, methodology.

EN 292-2:1991, Safety of machinery — Basic concepts, general principles for design — Part 2: Technical principles and specifications.

EN 294:1992, Safety of machinery — Safety distance to prevent danger zones being reached by the upper limbs.

EN 953:1997, Safety of machinery — Guards — General requirements for the design and construction of fixed and movable guards.

EN 1050:1996, Safety of machinery — Principles for risk assessment.

EN 1070:1998, Safety of machinery — Terminology.