



NSAI
Standards

Irish Standard
I.S. EN ISO 14122-4:2004

Safety of machinery - Permanent means of access to machinery - Part 4: Fixed ladders (ISO 14122-4:2004)

I.S. EN ISO 14122-4:2004

Incorporating amendments/corrigenda/National Annexes issued since publication:
EN ISO 14122-4:2004/A1:2010

The National Standards Authority of Ireland (NSAI) produces the following categories of formal documents:

I.S. xxx: Irish Standard – national specification based on the consensus of an expert panel and subject to public consultation.

S.R. xxx: Standard Recommendation - recommendation based on the consensus of an expert panel and subject to public consultation.

SWiFT xxx: A rapidly developed recommendatory document based on the consensus of the participants of an NSAI workshop.

| | | |
|--|--|---|
| <i>This document replaces:</i> prEN 12437-4 | <i>This document is based on:</i> EN ISO 14122-4:2004 | <i>Published:</i> 1 March, 2004 |
| This document was published under the authority of the NSAI and comes into effect on: 23 February, 2005 | | ICS number: 13.110 |
| 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 |
| Údarás um Chaighdeáin Náisiúnta na hÉireann | | |

ICS 13.110

English Version

**Safety of machinery - Permanent means of access to machinery
- Part 4: Fixed ladders - Amendment 1 (ISO 14122-4:2004/Amd
1:2010)**

Sécurité des machines - Moyens d'accès permanents aux
machines - Partie 4: Échelles fixes - Amendement 1 (ISO
14122-4:2004/Amd 1:2010)

Sicherheit von Maschinen - Ortsfeste Zugänge zu
maschinellen Anlagen - Teil 4: Ortsfeste Steigleitern -
Änderung 1 (ISO 14122-4:2004/Amd 1:2010)

This amendment A1 modifies the European Standard EN ISO 14122-4:2004; it was approved by CEN on 29 April 2010.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for inclusion of this amendment into the relevant 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 amendment 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, Croatia, 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: Avenue Marnix 17, B-1000 Brussels

Contents

Page

| | |
|--|---|
| Foreword..... | 3 |
| Annex ZA (informative) Relationship between this European Standard and the Essential Requirements of EU Directive 98/37/EC | 4 |
| Annex ZB (informative) Relationship between this European Standard and the Essential Requirements of EU Directive 2006/42/EC | 5 |

Foreword

This document (EN ISO 14122-4:2004/A1:2010) has been prepared by Technical Committee ISO/TC 199 "Safety of machinery" in collaboration with Technical Committee CEN/TC 114 "Safety of machinery" the secretariat of which is held by DIN.

This Amendment to the 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 January 2011, and conflicting national standards shall be withdrawn at the latest by January 2011.

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.

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 EU Directives.

For relationship with EU Directives, see informative Annex ZA and ZB, which are integral parts of this document.

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, Croatia, 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.

Endorsement notice

The text of ISO 14122-4:2004/Amd 1:2010 has been approved by CEN as a EN ISO 14122-4:2004/A1:2010 without any modification.

Annex ZA (informative)

Relationship between this European Standard and the Essential Requirements of EU Directive 98/37/EC

This European Standard has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association to provide a means of conforming to Essential Requirements of the New Approach Directive Machinery 98/37/EC, amended by 98/79/EC.

Once this standard is cited in the Official Journal of the European Union under that Directive and has been implemented as a national standard in at least one Member State, compliance with the normative clauses of this standard confers, within the limits of the scope of this standard, a presumption of conformity with the relevant Essential Requirements 1.6.2, "Access to operating position and service points", and 1.5.15, "Risks of slipping, tripping or falling", of that Directive and associated EFTA regulations.

WARNING — Other requirements and other EU Directives may be applicable to the product(s) falling within the scope of this standard.

Annex ZB (informative)

Relationship between this European Standard and the Essential Requirements of EU Directive 2006/42/EC

This European Standard has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association to provide a means of conforming to Essential Requirements of the New Approach Directive 2006/42/EC.

Once this standard is cited in the Official Journal of the European Union under that Directive and has been implemented as a national standard in at least one Member State, compliance with the normative Clauses of this standard confers, within the limits of the scope of this standard, a presumption of conformity with the relevant Essential Requirements 1.6.2, "Access to operating position and service points", and 1.5.15, "Risks of slipping, tripping or falling", of that Directive and associated EFTA regulations.

WARNING — Other requirements and other EU Directives may be applicable to the product(s) falling within the scope of this standard.

This page is intentionally left BLANK.

I.S. EN ISO 14122-4:2004
**INTERNATIONAL
STANDARD**

**ISO
14122-4**

First edition
2004-12-15

AMENDMENT 1
2010-04-15

**Safety of machinery — Permanent means
of access to machinery —**

**Part 4:
Fixed ladders**

AMENDMENT 1

*Sécurité des machines — Moyens d'accès permanents aux
machines —*

Partie 4: Échelles fixes

AMENDEMENT 1



Reference number
ISO 14122-4:2004/Amd.1:2010(E)

© ISO 2010

PDF disclaimer

This PDF file may contain embedded typefaces. In accordance with Adobe's licensing policy, this file may be printed or viewed but shall not be edited unless the typefaces which are embedded are licensed to and installed on the computer performing the editing. In downloading this file, parties accept therein the responsibility of not infringing Adobe's licensing policy. The ISO Central Secretariat accepts no liability in this area.

Adobe is a trademark of Adobe Systems Incorporated.

Details of the software products used to create this PDF file can be found in the General Info relative to the file; the PDF-creation parameters were optimized for printing. Every care has been taken to ensure that the file is suitable for use by ISO member bodies. In the unlikely event that a problem relating to it is found, please inform the Central Secretariat at the address given below.



COPYRIGHT PROTECTED DOCUMENT

© ISO 2010

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from either ISO at the address below or ISO's member body in the country of the requester.

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

Published in Switzerland

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.

Amendment 1 to ISO 14122-4:2004 was prepared by Technical Committee ISO/TC 199, *Safety of machinery*.

I.S. EN ISO 14122-4:2004

Safety of machinery — Permanent means of access to machinery —

Part 4: Fixed ladders

AMENDMENT 1

Conformant with ISO Guide 78¹⁾, this Amendment supports regional technical regulations for machinery safety according to the principles of UNECE Recommendation L²⁾. It comprises minor technical changes to the existing International Standard, aimed at ensuring compliance of the current edition of ISO 14122-1 with the relevant Essential Requirements of New Approach Directive 2006/42/EC on machinery, which replaced New Approach Directive 98/37/EC and entered into force on 2009-12-29 without a transition period.

IMPORTANT — This Amendment does not specify any *technical* change not directly required as a consequence of the new European legislation.

Page vi, Introduction

Replace the second paragraph, “This European standard is a type B standard as stated in EN ISO 12100.” with “This part of EN ISO 14122 is a type-B standard as stated in EN ISO 12100-1.”.

Delete the third paragraph beginning with “This standard is to be read in conjunction with [...]”.

Page 1, Scope

Number the existing Note as Note 1 and add the following Note 2:

NOTE 2 For mobile machinery, alternative requirements can apply due to their dimensions and particular conditions of use.

Page 1, Normative references

Add the following references:

EN ISO 14121-1, *Safety of machinery — Risk assessment — Part 1: Principles*

1) ISO Guide 78:2008, *Safety of machinery — Rules for drafting and presentation of safety standards*.

2) United Nations Economic Commission for Europe (UNECE), International Model for Technical Harmonization.

I.S. EN ISO 14122-4:2004

EUROPEAN STANDARD

EN ISO 14122-4

NORME EUROPÉENNE

EUROPÄISCHE NORM

December 2005

ICS 13.110

English version

Safety of machinery - Permanent means of access to machinery - Part 4: Fixed ladders (ISO 14122-4:2004)

Sécurité des machines - Moyens d'accès permanents aux
machines - Partie 4: Echelles fixes (ISO 14122-4:2004)

Sicherheit von Maschinen - Ortsfeste Zugänge zu
maschinellen Anlagen - Teil 4: Ortsfeste Steigleitern (ISO
14122-4:2004)

This European Standard was approved by CEN on 18 March 2003.

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.

CEN members are the national standards bodies of 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.



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

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

Contents

| | Page |
|--|------|
| Foreword..... | 3 |
| Introduction | 4 |
| 1 Scope | 5 |
| 2 Normative references | 5 |
| 3 Terms and definitions | 5 |
| 4 Safety requirements | 10 |
| 4.1 General requirements..... | 10 |
| 4.2 Strength of fixed ladders | 10 |
| 4.2.1 General requirements..... | 10 |
| 4.2.2 Fixing elements..... | 11 |
| 4.2.3 Platforms | 12 |
| 4.3 Conditions for installation of an fall protection device | 15 |
| 4.3.1 Conditions requiring the installation of an fall protection device | 15 |
| 4.3.2 Choice of the type of fall protection device | 16 |
| 4.4 Ladder | 16 |
| 4.4.1 Position of the rungs | 16 |
| 4.4.2 Rungs..... | 17 |
| 4.4.3 Devices against slipping-off..... | 19 |
| 4.4.4 Spacing between the ladder and any permanent obstruction | 19 |
| 4.5 Safety cage | 19 |
| 4.6 Guided type fall arrester on a rigid anchorage line..... | 19 |
| 4.7 Departure and arrival areas - Platforms | 19 |
| 4.7.1 Departure areas..... | 20 |
| 4.7.2 Arrival areas | 21 |
| 4.7.3 Access openings | 22 |
| 4.7.4 Climbing off and getting on to a fixed ladder safely | 22 |
| 4.7.5 Platforms | 24 |
| 5 Verification of safety requirements..... | 25 |
| 5.1 General..... | 25 |
| 5.2 Tests of fixed ladders with two stiles | 26 |
| 5.3 Testing of the safety cage..... | 26 |
| 5.4 Tests of fixed ladders with one stile | 28 |
| 5.4.1 Strength and bending of a ladder element; Torsion of the rungs | 28 |
| 5.4.2 Strength of the rungs | 29 |
| 5.4.3 Strength of the stile | 30 |
| 5.5 Test of the anchor points..... | 30 |
| 5.5.1 Fixed ladders with two stiles without fall arrester | 30 |
| 5.5.2 Fixed ladders with one stile..... | 31 |
| 5.5.3 Fixed ladders with fall arrester..... | 31 |
| 6 Assembly and operating instructions | 32 |
| 6.1 Assembly instructions | 32 |
| 6.2 Operating instructions for ladders with fall arrester..... | 32 |
| 6.3 Marking at points of entry and exit | 32 |
| Annex ZA (informative) Relationship between this European Standard and the Essential Requirements of EU Directive Machinery 98/37/EC | 33 |
| Bibliography | 34 |

Foreword

This document (EN ISO 14122-4:2004) has been prepared by Technical Committee CEN/TC 114 “Safety of machinery”, the secretariat of which is held by DIN, in collaboration with Technical Committee ISO/TC 199 “Safety of machinery”.

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

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 EU Directive(s).

For relationship with EU Directive(s), see informative Annex ZA, which is an integral part of this document.

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, Portugal, Slovakia, Slovenia, Spain, Poland, Sweden, Switzerland and the United Kingdom.

Introduction

This is the fourth part of the standard "Safety of machinery — Permanent means of access to machinery". The parts of the standard are:

Part 1: Choice of a fixed means of access between two levels

Part 2: Working platforms and walkways

Part 3: Stairs, stepladders and guard-rails

Part 4: Fixed ladders.

This European standard is a type B standard as stated in EN ISO 12100.

This standard is to be read in conjunction with Clause 1.6.2 "Access to operating position and servicing points" and 1.5.15 "Risk of slipping, tripping or falling" of the essential safety requirements expressed in Annex A of EN 292-2:1991/A1:1995. See also 5.5.6 "Measures for safe access to machinery" of EN ISO 12100-2:2003 which supersedes EN 292-2.

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

NOTE 1 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 will take precedence over the provisions of this type B standard.

NOTE 2 The use of materials other than metals (composite materials, so-called "advanced" materials, etc.) does not alter the application of the present standard.

1 Scope

This standard applies to all machinery (stationary and mobile) where fixed means of access are necessary.

The purpose of this standard is to define the general requirements for safe access to machines mentioned in EN ISO 12100-2. EN ISO 14122-1 gives advice about the correct choice of access means when the necessary access to the machine is not possible directly from the ground level or from a floor.

This standard applies to fixed ladders, which are a part of a machine.

This standard may also be applied to fixed ladders to that part of the building where the machine is installed, providing the main function of that part of the building is to provide a means of access to the machine.

NOTE This standard may be used also for means of access which are outside the scope of this standard. In those cases the possible relevant national or other regulations should be taken into account.

This standard applies also to ladders which are not permanently fixed to the machine and which may be removed, moved to the side or pivoted (swivel-mounted) for some operations of the machine (e. g. changing tools in a large press).

For the significant hazards covered by this standard, see Clause 4 of EN ISO 14122-1.

This standard is not applicable to machinery which are manufactured before the date of publication of this standard by CEN.

2 Normative references

The following referenced documents are indispensable for the application 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.

EN 131-2:1993, *Ladders — Requirements, tests, markings*.

EN 353-1, *Personal protective equipment against falls from a height — Part 1: Guided type fall arresters including a rigid anchorage line*.

EN 363, *Personal protective equipment against falls from a height — Fall arrest systems*.

EN ISO 12100-1:2003, *Safety of machinery — Basic concepts, general principles for design — Part 1: Basic terminology, methodology (ISO 12100-1:2003)*

EN ISO 12100-2:2003, *Safety of machinery — Basic concepts, general principles for design — Part 2: Technical principles (ISO 12100-2:2003)*.

EN ISO 14122-1, *Safety of machinery — Permanent means of access to machinery — Part 1: Choice of a fixed means of access between two levels (ISO 14122-1:2001)*.

EN ISO 14122-2, *Safety of machinery — Permanent means of access to machinery — Part 2: Working platforms and walkways (ISO 14122-2:2001)*.

EN ISO 14122-3, *Safety of machinery — Permanent means of access to machinery — Part 3: Stairs, stepladders and guard-rails (ISO 14122-3:2001)*.

3 Terms and definitions

For the purposes of this European Standard, the terms and definitions given in EN ISO 12100-1:2003, EN ISO 14122-1:2001 and the following apply.

This is a free preview. Purchase the entire publication at the link below:

[Product Page](#)

-
- Looking for additional Standards? Visit Intertek Inform Infostore
 - Learn about LexConnect, All Jurisdictions, Standards referenced in Australian legislation
-