



SLOVENSKI STANDARD
SIST EN 474-9:2007

01-maj-2007

BUXca Yý U
SIST EN 474-9:2000
SIST EN 474-9:2000/AC:2001

Stroji za zemeljska dela - Varnost - 9. del: Zahteve za stroje za polaganje cevi

Earth-moving machinery - Safety - Part 9: Requirements for pipelayers

Erdbaumaschinen - Sicherheit - Teil 9: Anforderungen für Rohrverleger

Engins de terrassement - Sécurité - Partie 9: Prescriptions applicables aux poseurs de canalisations

[SIST EN 474-9:2007](https://standards.iteh.ai/catalog/standards/sist/97239635-da20-4d5e-a00e-2d6b7912927d/en/en-474-9:2007)

[https://standards.iteh.ai/catalog/standards/sist/97239635-da20-4d5e-a00e-](https://standards.iteh.ai/catalog/standards/sist/97239635-da20-4d5e-a00e-2d6b7912927d/en/en-474-9:2006)

Ta slovenski standard je istoveten z: EN 474-9:2006

ICS:

53.100 Stroji za zemeljska dela Earth-moving machinery

SIST EN 474-9:2007 **en**

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST EN 474-9:2007

<https://standards.iteh.ai/catalog/standards/sist/97239635-da20-4d5e-a00e-2d6b7912927d/sist-en-474-9-2007>

English Version

Earth-moving machinery - Safety - Part 9: Requirements for pipelayers

Engins de terrassement - Sécurité - Partie 9: Prescriptions applicables aux poseurs de canalisations

Erdbaumaschinen - Sicherheit - Teil 9: Anforderungen für Rohrverleger

This European Standard was approved by CEN on 17 April 2006.

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.

iTeh STANDARD PREVIEW

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, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

[SIST EN 474-9:2007](https://standards.iteh.ai/catalog/standards/sist/97239635-da20-4d5e-a00e-2d6b7912927d/sist-en-474-9-2007)

<https://standards.iteh.ai/catalog/standards/sist/97239635-da20-4d5e-a00e-2d6b7912927d/sist-en-474-9-2007>



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

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

Contents

Page

Introduction	4
1 Scope	5
2 Normative references	5
3 Terms and definitions	6
4 List of additional significant hazards	6
5 Safety requirements and/or measures	6
6 Information for use	9
Annex A (normative) List of additional significant hazards – Pipelayers	10
Annex B (informative) Illustrations	11
Annex ZA (informative) Relationship between this European Standard and the Essential Requirements of EU Directive 98/37/EC	13
Bibliography	14

iTeh STANDARD PREVIEW
(standards.iteh.ai)

Figures

Figure B.1 — Crawler pipelayer	11
Figure B.2 — Wheel pipelayer	11
Figure B.3 — Pipelayer side view	12
Figure B.4 — Crawler pipelayer with a rotating upper structure	12

Tables

Table A.1 — List of additional significant hazards	10
--	----

Foreword

This document (EN 474-9:2006) has been prepared by Technical Committee CEN/TC 151 "Construction equipment and building material machines — Safety", 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 May 2007, and conflicting national standards shall be withdrawn at the latest by November 2008.

This European Standard supersedes EN 474-9:1998.

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.

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

For bibliographic references, see EN 474-1:2006.

EN 474 "Earth-moving machinery — Safety" comprises the following parts:

- Part 1: General requirements
- Part 2: Requirements for tractor-dozers
- Part 3: Requirements for loaders
- Part 4: Requirements for backhoe-loaders
- Part 5: Requirements for hydraulic excavators
- Part 6: Requirements for dumpers
- Part 7: Requirements for scrapers
- Part 8: Requirements for graders
- Part 9: Requirements for pipelayers
- Part 10: Requirements for trenchers
- Part 11: Requirements for earth and landfill compactors
- Part 12: Requirements for cable excavators

This European Standard is intended for use in combination with Part 1 of the series.

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, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

Introduction

This part of EN 474 is a type C standard as stated in EN ISO 12100-1:2003.

The machinery concerned and the extent to which hazards, hazardous situations and events are covered are indicated in the scope of this European Standard.

When provisions of this type C standard are different from those which are stated in type A or B standards, the provisions of this type C standard take precedence over the provisions of the other standards, for machines that have been designed and built according to the provisions of this type C standard.

iTeh STANDARD PREVIEW (standards.iteh.ai)

[SIST EN 474-9:2007](https://standards.iteh.ai/catalog/standards/sist/97239635-da20-4d5e-a00e-2d6b7912927d/sist-en-474-9-2007)

<https://standards.iteh.ai/catalog/standards/sist/97239635-da20-4d5e-a00e-2d6b7912927d/sist-en-474-9-2007>

1 Scope

This part of EN 474 deals with all significant hazards, hazardous situations and events relevant to pipelayers as defined in EN ISO 6165:2006, when they are used as intended and under conditions of misuse which are reasonably foreseeable by the manufacturer (see Clause 4).

The requirements of this part are complementary to the common requirements formulated in EN 474-1:2006.

This part does not repeat the requirements from EN 474-1:2006, but adds or replaces the requirements for application for pipelayers.

This part specifies the appropriate technical measures to eliminate or reduce risks arising from the significant hazards, hazardous situations and events during commissioning, operation and maintenance of pipelayers.

This part specifies additional requirements for rear mounted winches.

Pipelayers with rotating upper structure are excluded from the scope of this document. However, specific requirements are under development.

This European Standard is not applicable to pipelayers manufactured before the date of publication of this European Standard by CEN.

2 Normative references

The following referenced documents are indispensable for the application of this European Standard. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

- SIST EN 474-9:2007
<https://standards.iteh.ai/catalog/standards/sist-en-474-9-2007>
 2d6b7912927d/sist-en-474-9-2007
- EN 474-1:2006, *Earth-moving machinery — Safety — Part 1: General requirements*
- EN 1032:2003, *Mechanical vibration — Testing of mobile machinery in order to determine the vibration emission value*
- EN 1677-1:2000, *Components for slings — Safety — Part 1: Forged steel components, Grade 8*
- EN 1677-2:2000, *Components for slings — Safety — Part 2: Forged steel lifting hooks with latch, Grade 8*
- EN ISO 3411:1999, *Earth-moving machinery — Human physical dimensions of operators and minimum operator space envelope (ISO 3411:1995)*
- EN ISO 7096:2000, *Earth-moving machinery — Laboratory evaluation of operator seat vibration (ISO 7096:2000)*
- EN ISO 12100-1:2003, *Safety of machinery — Basic concepts, general principles for design — Part 1: Basic terminology, methodology (ISO 12100-1:2003)*
- ISO 4308-1:2003, *Cranes and lifting appliances — Selection of wire ropes — Part 1: General*
- ISO/DIS 6393:2004, *Earth-moving machinery — Determination of sound power level noise emissions — Stationary test conditions*
- ISO/DIS 6394:2004, *Earth-moving machinery — Determination of emission sound pressure level at operator's position — Stationary test conditions*
- ISO 6405-2:1993, *Earth-moving machinery — Symbols for operator controls and other displays — Part 2: Specific symbols for machines, equipment and accessories*

EN 474-9:2006 (E)

ISO 8813:1992, *Earth-moving machinery — Lift capacity of pipelayers and wheeled tractors or loaders equipped with side boom*

ISO 10968:2002, *Earth-moving machinery — Operator's controls*

3 Terms and definitions

For the purposes of this European Standard, the terms and definitions given in EN 474-1:2006, EN ISO 12100-1:2003 and the following apply.

NOTE 1 Terminology for pipelayers is specified in ISO 7136:2006 and illustrated in Annex B of this European Standard.

NOTE 2 Definitions used in EN and ISO standards referred to in this European Standard are also valid for this document.

3.1

pipelayer

self-propelled crawler or wheeled machine, having pipe-laying equipment with main frame, a load-hoist mechanism, vertically pivotable side boom, and counterweight, primarily designed to handle and lay pipes (see EN ISO 6165:2006)

4 List of additional significant hazards

See Annex A.

iTeh STANDARD PREVIEW

(standards.iteh.ai)

NOTE Annex A (normative) contains all the significant hazards, hazardous situations and events, as far as they are dealt with in this European Standard, identified by risk assessment as significant for this type of machinery and which require action to eliminate or reduce the risk.

[SIST EN 474-9:2007](https://standards.iteh.ai/catalog/standards/sist/97239635-da20-4d5e-a00e-2d6b7912927d/sist-en-474-9-2007)

<https://standards.iteh.ai/catalog/standards/sist/97239635-da20-4d5e-a00e-2d6b7912927d/sist-en-474-9-2007>

5 Safety requirements and/or measures

5.1 General

Pipelayers shall comply with the requirements of EN 474-1:2006, as far as not modified or replaced by the requirements of this part.

5.2 Operator's station

5.2.1 Cab

EN 474-1:2006, 5.3.1 applies with the exception that pipelayers do not need to be equipped with a cab.

Pipelayers shall be designed and built so that an operator's cab can be fitted. The manufacturer shall be able to provide the cab on demand.

5.2.2 Window(s)

EN 474-1:2006, 5.3.2.7 and 5.3.2.9 apply with the addition that pipelayers equipped with a cab shall be provided with motorised wiper(s) and washer in the lifting direction.

5.2.3 Heating and ventilation

EN 474-1:2006, 5.3.2.6 applies if a cab is fitted.

5.2.4 Operator's seat

Pipelayers with measured RMS-values on Z-axis, in accordance with EN 1032:2003, higher than 0,5 m/s² shall be equipped with a suspended seat complying with EN ISO 7096:2000 class EM6. As an alternative without testing the machine, the pipelayers shall be equipped with a suspended seat complying with EN ISO 7096:2000 class EM6.

5.2.5 Operator's protection

EN 474-1:2006, 5.3.3 does not applied for pipelayers.

5.3 Stability and lifting equipment

5.3.1 General

EN 474-1:2006, 5.11 applies with the additions given in 5.3.2:

5.3.2 Lifting equipment

5.3.2.1 General

Lifting equipment shall meet the requirements in ISO 8813:1992.

5.3.2.2 Load lowering speed

A device to control the lowering speed of the boom and the hook shall be fitted so that under normal working conditions the operator can control movement and stop the load. This device shall not prevent the deliberate release of the free fall of the load hook (hook winch only).

5.3.2.3 Pipe laying brakes

The pipe laying system shall be fitted with brakes which can be released by controls and automatically applied when the operator stops actuating or when the power source fails. The brakes shall be designed to withstand 1,5 times the rated lift capacity under conditions specified by the manufacturer.