

STN	Tunelovacie stroje. Uzavreté tlakové priestory. Bezpečnostné požiadavky.	STN EN 12110
		27 5522

Tunnelling machines - Air locks - Safety requirements

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 09/14

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Úrad pre normalizáciu, metrológiu a skúšobníctvo SR, odbor SÚTN, 2014
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rozmnožovať a rozširovať iba so súhlasom Úradu pre normalizáciu, metrológiu a skúšobníctvo SR.

English Version

Tunnelling machines - Air locks - Safety requirements

Machines pour la construction de tunnels - Sas de transfert
- Prescriptions de sécurité

Tunnelbaumaschinen - Druckluftschleusen -
Sicherheitstechnische Anforderungen

This European Standard was approved by CEN on 6 March 2014.

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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-CENELEC Management Centre has the same status as the official versions.

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Foreword

This document (EN 12110:2014) 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of an identical text or by endorsement, at the latest by November 2014 and conflicting national standards shall be withdrawn at the latest by November 2014.

This document supersedes EN 12110:2002+A1:2008.

The following main technical changes have been made compared to EN 12110:2002+A1:2008.

- a) general revision of the structure of EN 12110;
- b) revision of fire protection requirements;
- c) revision of the access dimensions on air locks;
- d) new structure of requirements for electrical equipment and the emergency provisions for power supply and lighting;
- e) revision of requirements for oxygen supply.

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.

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, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Introduction

This document is a type C standard as stated in EN ISO 12100.

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

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.

1 Scope

This European Standard applies to the design, construction, equipping, marking and testing of air locks as defined in 3.3 including pressure bulkheads as defined in 3.4, which are to be used in tunnelling work. An oxygen breathing system used to provide the breathing supply necessary to conduct a safe decompression is also covered by this standard.

This European Standard is not applicable to machinery and equipment which is manufactured before the date of publication of this document by CEN.

NOTE Air locks can be connected to tunnelling machinery. This standard can help the design of air locks and bulkheads in other compressed air work in construction.

This European Standard deals with all significant hazards, hazardous situations and events relevant to such machinery when they are used as intended and under conditions of misuse which are reasonably foreseeable by the manufacturer (see Clause 4).

This European Standard does not cover the supply of services to the air lock.

Vibration, noise and EMC (Electromagnetic compatibility) hazards are not significant hazards for air locks.

This European Standard does not cover the hazards due to the mobility of the machinery.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 250:2014, *Respiratory equipment — Open-circuit self-contained compressed air diving apparatus — Requirements, testing, marking*

EN 12021:2014, *Respiratory equipment — Compressed gases for breathing apparatus*

EN 12464-1:2011, *Light and lighting — Lighting of work places — Part 1: Indoor work places*

EN 60204-1:2006, *Safety of machinery — Electrical equipment of machines — Part 1: General requirements (IEC 60204-1:2005, modified)*

EN 60529:1991, *Degrees of protection provided by enclosures (IP code) (IEC 60529:1989)*

EN 61000-6-1:2007, *Electromagnetic compatibility (EMC) — Part 6-1: Generic standards — Immunity for residential, commercial and light-industrial environments (IEC 61000-6-1:2005)*

EN 61000-6-2:2005, *Electromagnetic compatibility (EMC) — Part 6-2: Generic standards — Immunity for industrial environments (IEC 61000-6-2:2005)*

EN 61000-6-3:2007, *Electromagnetic compatibility (EMC) — Part 6-3: Generic standards — Emission standard for residential, commercial and light-industrial environments (IEC 61000-6-3:2006)*

EN 61000-6-4:2007, *Electromagnetic compatibility (EMC) — Part 6-4: Generic standards — Emission standard for industrial environments (IEC 61000-6-4:2006)*

EN 61310-1:2008, *Safety of machinery — Indication, marking and actuation — Part 1: Requirements for visual, acoustic and tactile signals (IEC 61310-1:2007)*

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EN ISO 3411:2007, *Earth-moving machinery — Physical dimensions of operators and minimum operator space envelope (ISO 3411:2007)*

EN ISO 5171:2010, *Gas welding equipment — Pressure gauges used in welding, cutting and allied processes (ISO 5171:2009)*

EN ISO 12100:2010, *Safety of machinery — General principles for design — Risk assessment and risk reduction (ISO 12100:2010)*

EN ISO 13849-1:2008, *Safety of machinery — Safety-related parts of control systems — Part 1: General principles for design (ISO 13849-1:2006)*

EN ISO 14113:2013, *Gas welding equipment — Rubber and plastics hose and hose assemblies for use with industrial gases up to 450 bar (45 MPa) (ISO 14113:2013)*

IEC 60364-7-706:2005, *Low-voltage electrical installations — Part 7-706: Requirements for special installations or locations — Conducting locations with restricted movement*

IEC/TR 60877:1999, *Procedures for ensuring the cleanliness of industrial-process measurement and control equipment in oxygen service*

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