

Transporditavad gaasiballoonid. Ballooni ja ventiilimaterjali kokkusobivus sisalduva gaasi koostisega. Osa 3: Autogeense süttimise katse hapnikukeskkonnas

Transportable gas cylinders - Compatibility of cylinder and valve materials with gas contents - Part 3: Autogenous ignition test in oxygen atmosphere

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN ISO 11114-3:1999 sisaldab Euroopa standardi EN ISO 11114-3:1997+AC:1998 ingliskeelset teksti. Käesolev dokument on jõustatud 12.12.1999 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes. Standard on kättesaadav Eesti standardiorganisatsioonist.	This Estonian standard EVS-EN ISO 11114-3:1999 consists of the English text of the European standard EN ISO 11114-3:1997+AC:1998. This document is endorsed on 12.12.1999 with the notification being published in the official publication of the Estonian national standardisation organisation. The standard is available from Estonian standardisation organisation.
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Käsitlusala: Käesolev standard määrab kindlaks katsemeetodi rõhu all oleva gaasilise hapniku keskkonnas mittemetalliliste materjalide autogeense süttimise temperatuuri määramiseks. Autogeense süttimise temperatuur on materjalide liigitamise kriteerium ja seda kasutatakse abivahendina materjalide valikul gaasilise hapniku keskkonnas kasutamiseks. Käesoleva standardi lisas B on laiaulatuslik publitseeritud materjalide bibliograafia, millel käesolev standard põhineb.	Scope:
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ICS 23.020.30

Võtmesõnad: gaasid, gaasimahutid, gaasiventilid, isesüttimise temperatuur, katsearuande lehed, kindlaks määramine, kokkusobivus, surugaasimahutid, testimine

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Descriptors: Gas cylinders, valves, materials, compatibility, testing.

English version

Transportable gas cylinders

Compatibility of cylinder and valve materials with gas contents

Part 3: Autogenous ignition test in oxygen atmosphere

(ISO 11114-3 : 1997, including Corrigendum AC : 1998)

Bouteilles à gaz transportables –
Compatibilité des matériaux des
bouteilles et des robinets avec les
contenues gazeux – Partie 3: Essai
d'auto-inflammation sous atmos-
phère d'oxygène
(ISO 11114-3 : 1997, Corrigendum
AC : 1998 inclus)

Ortsbewegliche Gasflaschen – Ver-
träglichkeit von Werkstoffen für Gas-
flaschen und Ventile mit den in
Berührung kommenden Gasen –
Teil 3: Prüfung der Selbstentzündungs-
temperatur in sauerstoffhaltiger
Atmosphäre (ISO 11114-3 : 1997,
einschließlich Berichtigung AC : 1998)

This European Standard was approved by CEN on 1997-09-18 and Corrigendum AC on 1998-04-02.

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.

The European Standards exist 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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CEN

European Committee for Standardization
Comité Européen de Normalisation
Europäisches Komitee für Normung

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Contents

Foreword	2
Introduction	3
1 Scope	3
2 Principle	3
3 Preparation of test samples	3
4 Test apparatus	4
5 Oxygen purity	5
6 Test procedure	5
7 Results	7
8 Test record	7
Annex A (informative) Test Record Sheet	8
Annex B (informative) Bibliography	9
Annex ZZ (informative) Corresponding International and European Standards for which equivalents are not given in the text	11

Foreword

This text of EN ISO 11114-3:1997 has been prepared by Technical Committee CEN/TC 23 "Transportable gas cylinders", the secretariat of which is held by BSI, in collaboration with Technical Committee ISO/TC 58 "Gas cylinders".

The text of the draft standard was submitted to the Formal Vote and was approved by CEN as EN ISO 1114-3 on 97-09-18.

This European Standard has been submitted for reference into the RID and/or in the technical annexes of the ADR.

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 April 1998, and conflicting national standards shall be withdrawn at the latest by April 1998.

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

Introduction

This Standard is one of a three-part Standard concerning compatibility of gases and gas mixtures with materials :

- Part 1 : Metallic materials ;
- Part 2 : Non metallic materials ;
- Part 3 : Autogenous ignition test in oxygen atmosphere.

The following test method is referenced in EN ISO 11114-1.

Further information about oxygen compatibility is given in EN ISO 11114-1 and prEN ISO 11114-2.

Other oxygen compatibility test methods include oxygen index (see ISO 4589), heat of combustion and adiabatic compression on materials.

1 Scope

This standard specifies a test method to determine the autogenous ignition temperature of non metallic materials in pressurized gaseous oxygen.

Autogenous ignition temperature is a criterion for ranking materials, and can be used to assist with the choice of materials used in the presence of gaseous oxygen.

Annex B of this standard is a comprehensive bibliography of the published material on which this standard is based.

NOTE : This standard can be used for the selection of nonmetallic materials for gas cylinders and accessories ; for example, to select the materials in order to meet the requirement for type-testing for oxygen compatibility of all oxygen gas cylinder valves as specified in EN 849.

2 Principle

A small quantity of the test material is heated in pressurized oxygen. A continuous recording is made of pressure and temperature in order to determine the point of autogenous ignition, at which point a sudden increase in temperature and pressure is observed (this point is known as autogenous ignition temperature).

3 Preparation of test samples

Test samples shall be prepared in such a manner as to prevent contamination.

Test samples may be in liquid or solid form. In the case of solids, the material shall be finely divided. A sample mass between 0,06 g and 0,5 g is used for each test.

NOTE : This mass should be adjusted to take into consideration the volume of the test cell. A sample of 0,5 g in a test cell volume of between 30 cm³ and 250 cm³ has been found to be suitable.