

საქართველოს სტანდარტი

აფეთქების და ჟანგბადის კონცენტრაციის ლიმიტების განსაზღვრა (LOC)
ადვილალეხადი გაზებისა და ორთქლისათვის

საქართველოს სტანდარტებისა და მეტროლოგიის
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საინფორმაციო ნაწილი. სრული ტექსტის სანახავად შეიძინეთ სტანდარტი.

English Version

Determination of the explosion limits and the limiting oxygen concentration(LOC) for flammable gases and vapours

Détermination des limites d'explosivité des gaz et vapeurs et détermination de la concentration limite en oxygène (CLO) des gaz et des vapeurs inflammables

Bestimmung der Explosionsgrenzen und der Sauerstoffgrenzkonzentration (SGK) für brennbare Gase und Dämpfen

This European Standard was approved by CEN on 7 November 2016.

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

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European foreword

This document (EN 1839:2017) has been prepared by Technical Committee CEN/TC 305 “Potentially explosive atmospheres - Explosion prevention and protection”, the secretariat of which is held by DIN.

This document supersedes EN 14756:2006, and EN 1839:2012.

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of an identical text or by endorsement, at the latest by July 2017, and conflicting national standards shall be withdrawn at the latest by January 2018.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN 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 Directive(s).

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

According to the CEN-CENELEC Internal Regulations, the national standards organisations 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, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Introduction

The hazard of an explosion can be avoided by preventing the formation of explosive mixtures of gases and/or vapours with air. To do so, the explosion limits (also known as “flammability limits”) or the limiting oxygen concentration of the flammable substance need to be known. These limits depend mainly on:

- the properties of the flammable substance;
- temperature and pressure;
- size and shape of the test vessel;
- ignition source (type, energy);
- the criterion for self-propagating combustion;
- the inert gas (in case of the limiting oxygen concentration).

To obtain reliable and comparable results it is necessary to standardize the conditions for determining the explosion limits resp. the limiting oxygen concentration (i.e. apparatus and procedure). However, it is not possible to provide one single method that is suitable for all types of substances. For practical reasons, it is preferable to use apparatus that can also be used for the determination of other explosion characteristics. This European Standard, therefore, details two methods, namely, the tube method (method T) and the bomb method (method B). In general, the tube method gives a wider explosion range. Differences in the explosion limits and limiting oxygen concentration determined by the two methods can vary by up to 10 % relative.

For substances which are difficult to ignite, only a modified tube method is suitable. This is described in Annex A.

საინფორმაციო ნაწილი. სრული ტექსტის სანახავად შეიძინეთ სტანდარტი.