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STN	**Stanovenie medzí výbušnosti plynov a pár pri zvýšenom tlaku, zvýšenej teplote alebo s okysličovadlami inými ako vzduch**	**STN EN 17624** 38 9690

Determination of explosion limits of gases and vapours at elevated pressures, elevated temperatures or with oxidizers other than air

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

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English Version

Determination of explosion limits of gases and vapours at elevated pressures, elevated temperatures or with oxidizers other than air

Détermination des limites d'explosivité des gaz et vapeurs à pressions et températures élevées avec des oxydants autres que l'air

Bestimmung der Explosionsgrenzen von Gasen und Dämpfen bei erhöhten Drücken, erhöhten Temperaturen oder mit Oxidationsmitteln, welche nicht aus Luft bestehen

This European Standard was approved by CEN on 7 February 2022.

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

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Contents

Page

European foreword

This document (EN 17624:2022) 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 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of an identical text or by endorsement, at the latest by September 2022, and conflicting national standards shall be withdrawn at the latest by September 2022.

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 Standardization Request 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.

Any feedback and questions on this document should be directed to the users’ national standards body. A complete listing of these bodies can be found on the CEN website.

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Introduction

In accordance with EN ISO 12100:2010, this is a type-B standard.

The hazard of an explosion can be avoided by preventing the formation of explosive mixtures of gases and/or vapours with oxidizers. To do so, the explosion limits (also known as “flammability limits”) of the flammable substance need to be known. These limits are a strong function of the pressure and temperature within the system.

Standard EN 1839:2017 has methods suitable for determining these limits at atmospheric conditions. Technical conditions in plants, etc. can differ substantially from these assumed atmospheric conditions. Furthermore, explosive mixtures of flammable substances and oxidizers other than air are likely to occur.

To obtain reliable and comparable results it is necessary to standardize the conditions for determining the explosion limits at non-atmospheric conditions.

1 Scope

This document specifies a test method to determine the explosion limits of gases, vapours and their mixtures, mixed with a gaseous oxidizer or an oxidizer/inert gas mixture at pressures from 0,10 MPa to 10 MPa and for temperatures up to 400 °C.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 ISO 10156:2017, *Gas cylinders - Gases and gas mixtures - Determination of fire potential and oxidizing ability for the selection of cylinder valve outlets (ISO 10156:2017)*