SVENSK STANDARD
SS-EN ISO 13088:2012

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Gasflaskor – Flaskpaket för acetylen – Villkor och kontroll vid fyllning (ISO 13088:2011)

Gas cylinders – Acetylene cylinder bundles – Filling conditions and filling inspection (ISO 13088:2011)

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Europastandarden EN ISO 13088:2012 gäller som svensk standard. Detta dokument innehåller den officiella engelska versionen av EN ISO 13088:2012.

Denna standard ersätter SS-EN 12755, utgåva 1 och SS-ISO 13088:2011, utgåva 1.

The European Standard EN ISO 13088:2012 has the status of a Swedish Standard. This document contains the official version of EN ISO 13088:2012.

This standard supersedes the Swedish Standard SS-EN 12755, edition 1 and SS-ISO 13088:2011, edition 1.

Upplysningar om sakinnehållet i standarden lämnas av SIS, Swedish Standards Institute, telefon 08-555 520 00. Standarder kan beställas hos SIS Förlag AB som även lämnar allmänna upplysningar om svensk och utländsk standard.

Information about the content of the standard is available from the Swedish Standards Institute (SIS), telephone +46 8 555 520 00. Standards may be ordered from SIS Förlag AB, who can also provide general information about Swedish and foreign standards.

Denna standard är framtagen av kommittén för Gasflaskor, SIS/TK 296.

Har du synpunkter på innehållet i den här standarden, vill du delta i ett kommande revideringsarbete eller vara med och ta fram andra standarder inom området? Gå in på www.sis.se - där hittar du mer information.

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN ISO 13088

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Supersedes EN 12755:2000

English Version

Gas cylinders - Acetylene cylinder bundles - Filling conditions and filling inspection (ISO 13088:2011)

Bouteilles à gaz - Cadres de bouteilles d'acétylène - Conditions de remplissage et contrôle au remplissage (ISO 13088:2011)

Gasflaschen - Acetylenflaschenbündel - Füllbedingungen und Inspektion beim Füllen (ISO 13088:2011)

This European Standard was approved by CEN on 6 October 2012.

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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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EUROPEAN COMMITTEE FOR STANDARDIZATION
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EUROPÄISCHES KOMITEE FÜR NORMUNG

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Foreword

The text of ISO 13088:2011 has been prepared by Technical Committee ISO/TC 58 “Gas cylinders” of the International Organization for Standardization (ISO) and has been taken over as EN ISO 13088:2012 by Technical Committee CEN/TC 23 “Transportable gas cylinders” the secretariat of which is held by BSI.

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 2013, and conflicting national standards shall be withdrawn at the latest by April 2013.

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

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN 12755:2000.

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

Endorsement notice

The text of ISO 13088:2011 has been approved by CEN as a EN ISO 13088:2012 without any modification.

Introduction

This International Standard aims at the harmonization of the different operating and filling conditions of acetylene cylinder bundles and covers requirements that reflect current practice and experience regarding inspection at the time of filling.

Where there is any conflict between this International Standard and any applicable regulation, the regulation always takes precedence.

In International Standards, weight is equivalent to a force, expressed in newtons. However, in common parlance (as used in terms defined in this International Standard), the word “weight” continues to be used to mean “mass”, but this practice is deprecated (see ISO 80000-4).

In this International Standard the unit bar is used, due to its universal use in the field of technical gases. It should, however, be noted that bar is not an SI unit, and that the according SI unit for pressure is pascal (Pa).

Pressure values given in this International Standard are given as gauge pressure (pressure exceeding atmospheric pressure) unless noted otherwise.

Gas cylinders — Acetylene cylinder bundles — Filling conditions and filling inspection

1 Scope

This International Standard specifies the minimum requirements for the filling conditions and filling inspection of acetylene cylinder bundles. It applies both to bundles which are filled while the cylinders are assembled in the bundle and to bundles of which the cylinders are filled as individual cylinders and are assembled into a bundle after filling. It does not apply to bundles containing solvent-free acetylene cylinders.

This International Standard is not applicable to individual acetylene cylinders that are not intended to be assembled into a bundle (see ISO 11372).

2 Normative references

The following referenced documents are indispensable for the application 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.

ISO 11372, *Gas cylinders — Acetylene cylinders — Filling conditions and filling inspection*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1
acetylene cylinder
cylinder manufactured and suitable for the transport of acetylene, containing a porous material and solvent for acetylene, with a valve and other accessories affixed to the cylinder

NOTE When there is no risk of ambiguity, the word “cylinder” is used.

3.2
acetylene cylinder bundle
transportable unit comprising of at least 2 cylinders up to and usually not exceeding 16 cylinders that are permanently connected together by a manifold and contained within a rigid frame equipped with all necessary equipment for filling and use

3.3
cylinder shell
⟨acetylene cylinders⟩ empty cylinder manufactured and suitable for receiving and containing a porous material for use as part of an acetylene cylinder

3.4
filler
⟨gas cylinders⟩ trained person responsible for inspection prior to, during and immediately after filling

3.5
maximum acetylene content
⟨acetylene cylinder bundles⟩ specified maximum weight of acetylene including saturation acetylene in the bundle cylinder

NOTE For the relationship of the maximum acetylene content of bundle cylinders and of individual cylinders, see 4.2.1.

3.6
maximum acetylene charge
⟨acetylene cylinder bundles⟩ maximum acetylene content minus the saturation gas

3.7
porous material
⟨acetylene cylinders⟩ single- or multiple-component material introduced to, or formed in, the cylinder shell, that, due to its porosity, allows the absorption of a solvent/acetylene solution

NOTE The porous material may be either:

— monolithic, consisting of a solid product obtained by reacting materials or by materials connected together with a binder, or

— non-monolithic, consisting of granular, fibrous or similar materials without the addition of a binder.

3.8
residual gas
⟨acetylene cylinder bundles⟩ weight of acetylene including the saturation acetylene contained in the cylinders of a bundle returned for filling

3.9
saturation gas
⟨acetylene cylinders⟩ acetylene that remains dissolved in the solvent in the cylinder at atmospheric pressure (1,013 bar) and at a temperature of 15 °C

3.10
solvent
⟨acetylene cylinders⟩ liquid that is absorbed by the porous material and is capable of dissolving and releasing acetylene

NOTE The following abbreviations are used:

— “A” for acetone;

— “DMF” for dimethylformamide.

3.11
solvent operating range
⟨acetylene cylinder bundles⟩ range from the minimum to the maximum solvent content permissible in a bundle which is filled while the cylinders are assembled

NOTE For the determination of the solvent operating range, see Annex A.

3.12
specified solvent content
⟨acetylene cylinders⟩ weight of solvent that the acetylene cylinder shall contain in accordance with the type approval

3.13
tare
⟨acetylene cylinders⟩ reference weight of the acetylene cylinder including the specified solvent content

NOTE 1 The tare is further specified in accordance with definitions 3.13.1 to 3.13.2.

NOTE 2 For cylinders with solvent, the tare is expressed by indicating either tare S or both tare A and tare S.

3.13.1
tare A
⟨acetylene cylinders⟩ sum of the weights of the empty cylinder shell, the porous material, the specified solvent content, the valve, the coating, where applicable, and all other parts that are permanently attached (e.g. by clamping or bolting) to the cylinder when it is presented to be filled

3.13.2
tare S
⟨acetylene cylinders⟩ tare A plus the weight of the saturation gas

3.14
bundle tare
⟨acetylene cylinder bundles⟩ reference weight of the acetylene cylinder bundle including its solvent

NOTE The bundle tare is further specified in accordance with 3.14.1 to 3.14.4.

3.14.1
tare BA_{max}
⟨acetylene cylinder bundles⟩ sum of tare A for all cylinders permanently connected together by a manifold containing the maximum solvent content [therefore including the amount of the positive solvent operating range (see A.3)] plus the weights of the rigid frame and all other associated and permanently attached equipment

3.14.2
tare BS_{max}
⟨acetylene cylinder bundles⟩ sum of tare S for all cylinders permanently connected together by a manifold containing the maximum solvent content including the amount of the positive solvent operating range (see A.3) plus the weights of the rigid frame and all other associated and permanently attached equipment

3.14.3
tare BA_{min}
⟨acetylene cylinder bundles⟩ sum of tare A of all cylinders permanently connected together by a manifold containing the minimum solvent content [therefore excluding the amount of the negative solvent operating range (see A.3)] plus the weights of the rigid frame and all other associated and permanently attached equipment

3.14.4
tare BS_{min}
⟨acetylene cylinder bundles⟩ sum of tare S of all cylinders permanently connected together by a manifold containing the minimum solvent content [therefore excluding the amount of the negative solvent operating range (see A.3)] plus the weights of the rigid frame and all other associated and permanently attached equipment

3.15
maximum gross weight
⟨acetylene cylinder bundles⟩ tare BA_{max} plus the maximum acetylene content of all bundle cylinders or tare BS_{max} plus the maximum acetylene charge of all bundle cylinders, respectively