SWEDISH STANDARDS INSTITUTE

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Utgåva 1

Gasflaskor – Procedur för byte av gasförsörjning (ISO 11621:1997)

Gas cylinders – Procedures for change of gas service (ISO 11621:1997)

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The European Standard EN ISO 11621:2005 has the status of a Swedish Standard. This document contains the official English version of EN ISO 11621:2005.

This standard supersedes the Swedish Standard SS-EN 1795, edition 1.

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Gas cylinders - Procedures for change of gas service (ISO 11621:1997)

Bouteilles à gaz - Mode opératoire pour le changement de service de gaz (ISO 11621:1997)

Gasflaschen - Verfahren für den Wechsel der Gasart (ISO 11621:1997)

This European Standard was approved by CEN on 22 September 2005.

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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 Central Secretariat has the same status as the official versions.

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Management Centre: rue de Stassart, 36 B-1050 Brussels

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Foreword

The text of ISO 11621:1997 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 11621:2005 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of an identical text or by endorsement, at the latest by April 2006, and conflicting national standards shall be withdrawn at the latest by April 2006.

This document supersedes EN 1795:1997.

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

Endorsement notice

The text of ISO 11621:1997 has been approved by CEN as EN ISO 11621:2005 without any modifications.

NOTE Normative references to International Standards are listed in annex ZA (normative).

Introduction

It is occasionally desirable to change gas cylinders from one gas service to another. Certain of these service changes can be made quite easily, while others require a careful inspection of the interior and exterior of the cylinder to detect the presence of corrosion products or contaminants, which must be removed for safety reasons or to avoid undesirable contamination of the contained gas.

This International Standard has been prepared to assist those engaged in the filling of gas cylinders for changing cylinders from one gas service to another.

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Gas cylinders — Procedures for change of gas service

1 Scope

This International Standard applies to seamless steel, aluminium alloy and welded steel refillable cylinders of all sizes, including large cylinders (water capacity greater than 150 l).

It provides general requirements and procedures to be considered whenever a cylinder is being transferred from one gas service to another for permanent and liquefied gases.

It does not apply to cylinders for dissolved acetylene, radioactive gases or gases listed in group G of table 1.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 5145:1990, *Cylinder valve outlets for gases and gas mixtures — Selection and dimensioning.*

ISO 6406:1992, *Periodic inspection and testing of seamless steel gas cylinders.*

ISO 10156:1996, *Gases and gas mixtures — Determination of fire potential and oxidizing ability for the selection of cylinder valve outlets.*

ISO 10460:1993, *Welded carbon steel gas cylinders — Periodic inspection and testing.*

ISO 10461:1993, *Seamless aluminium-alloy gas cylinders — Periodic inspection and testing.*

ISO 11114-1:—[1)], *Compatibility of cylinder and valve materials with gas contents — Part 1: Metallic materials.*

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1) To be published.

3 Abbreviations

NDT = Non-destructive testing.

SCT = Stress corrosion testing.

4 General requirements

Cylinders are manufactured in accordance with international and/or national standards and are intended for use with a variety of gases under specified filling conditions. Although some cylinders are restricted to specific gas services, the majority of cylinders can be transferred from one gas service to another, provided applicable regulations are observed and appropriate procedures are followed and material compatibilities are considered (see ISO 11114-1).

Cylinders which have been in service may have been exposed to conditions that render them unsafe during, or when transferred to, a different gas service. These conditions could result in contamination, corrosion or residual gases that may react. Therefore, it is essential that all procedures detailed in clause 5 and displayed in tables 1, 2 and 3 be carefully followed.

Particular attention shall be directed to assuring that purging or cleaning procedures, where specified, remove all residual gas, contaminants or corrosion products and that cleaning agents are removed and cylinders dried and sealed to prevent entry of dirt or moisture after cleaning.

Persons using this International Standard shall be knowledgeable in the handling of compressed gases and be familiar with the chemical and physical properties of the commodities which they charge into cylinders and of the contaminants which are likely to be found therein.

4.1 Grouping of gases

For the purposes of this International Standard, the gases for which cylinder transfers are most frequently desired have been separated into several groups. This separation has taken into consideration the chemical and physical reactivity of the gases and of the contaminants which are most frequently encountered.

The requirements in this International Standard may not be applicable to gases or mixtures which are not included in the gas groups given in table 3. Recommendations for the cleaning of cylinders which have contained such gases shall be obtained from the manufacturer of the cylinder and/or gas. The values quoted in table 1 for the FTSC code are taken from ISO 5145 or ISO 10156.

4.2 Gases which may affect cylinder condition

Cylinders which have been in certain gas services may be subjected to conditions which could affect the future serviceability of the cylinder or render it unsuitable for use in any other gas service. Cylinders in such services are subject to rigid requalification procedures or may be prohibited from use in other gas services. Examples are:

steel cylinders in carbon monoxide/carbon monoxide mixture service which may be subject to stress corrosion cracking;

steel cylinders which have been in hydrogen service but which were not designed and manufactured for this gas (see ISO 11114-1).

5 Actions for change of service

5.1 General

Because of the potential safety problems (e.g. corrosion, contamination, compatibility), specific actions are required when transferring a cylinder from one gas service to another. The steps (set of actions), denoted by a number, are