

# Transportable gas cylinders — Cylinder bundles for permanent and liquefied gases (excluding acetylene) — Inspection at time of filling

移动式气瓶——永久气体和液化气体气瓶组  
(乙炔瓶除外)——充装时的检验

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## National foreword

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The UK participation in its preparation was entrusted by Technical Committee PVE/3, Gas containers, to Subcommittee PVE/3/7, Gas cylinder (receptacle) operations, which has the responsibility to:

- aid enquirers to understand the text;
- present to the responsible European committee any enquiries on the interpretation, or proposals for change, and keep the UK interests informed;
- monitor related international and European developments and promulgate them in the UK.

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This British Standard, having been prepared under the direction of the Engineering Sector Policy and Strategy Committee, was published under the authority of the Standards Policy and Strategy Committee on 18 April 2002

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au moment du remplissage

Ortsbewegliche Gasflaschen - Flaschenbündel für  
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Prüfung zum Zeitpunkt des Füllens

This European Standard was approved by CEN on 30 December 2001.

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## Contents

	page
Foreword .....	3
Introduction .....	4
1 <b>Scope</b> .....	5
2 <b>Normative references</b> .....	5
3 <b>Terms and definitions</b> .....	5
4 <b>Inspection at time of filling</b> .....	6
Bibliography .....	8

## Foreword

This document EN 13365:2002 has been prepared 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of an identical text or by endorsement, at the latest by September 2002, and conflicting national standards shall be withdrawn at the latest by September 2002.

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, Malta, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

## **Introduction**

Transportable gas cylinder bundles require inspection at time of filling, both before and after the filling process, in order to ensure that all components are suitable for the intended filling conditions and are free of serious defects and contamination that can affect the integrity of the bundle.

## 1 Scope 范围

This European Standard specifies the requirements for inspection before, during and after the time of filling for cylinder bundles, also referred to as bundles.

This standard does not apply to acetylene bundles which are covered in EN 12755.

This standard does not cover bundles when they are a part of a battery vehicle.

## 2 Normative references 引用标准

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text, and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

EN 1802, *Transportable gas cylinders — Periodic inspection and testing of seamless aluminium alloy gas cylinders.*

EN 1968, *Transportable gas cylinders — Periodic inspection and testing of seamless steel gas cylinders.*

prEN 13769, *Transportable gas cylinders — Cylinder bundles — Design, manufacture, identification and testing.*

prEN ISO 11623, *Transportable gas cylinders — Periodic inspection and testing of composite gas cylinders (ISO/FDIS 11623:2000).*

## 3 Terms and definitions 名词和定义

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

### 3.1

#### **cylinder bundle (bundle)**

transportable assembly, which is designed for being routinely lifted and which consists of a frame and two or more cylinders each of capacity up to 150 litres connected to a manifold by cylinder valves or fittings such that the cylinders are filled, transported and emptied without disassembly

### 3.2

#### **frame** 支架

structural and non structural members of a bundle which combine all other components together, whilst providing protection for the bundle's cylinders, valves and manifold and which enable the bundle to be transported

### 3.3

#### **cylinder valve**

valve which is fitted into a cylinder and to which a manifold is connected

### 3.4

#### **cylinder fitting** 气瓶安装

device with no gas shut-off capability which serves as a method for connecting the manifold of a bundle to its individual cylinders when cylinder valves are not fitted to the cylinders

### 3.5

#### **manifold** 管束

system for connecting the cylinder valves or cylinder fittings to the main outlet valve(s) or outlet connection(s) of the bundle

**3.6**

**main outlet valve** 主出口阀

valve which is fitted to the manifold of the bundle isolating it from the outlet connection(s)

**3.7**

**liquefied gas**

gas which has a critical temperature of 20 °C or above

**3.8**

**maximum permissible filling weight**

the product of the minimum guaranteed water capacity of the cylinders of the cylinder bundle and the filling ratio of the gas contained

**4 Inspection at time of filling** 充装时的检验

**4.1 Inspection prior to filling** 充装前检验

Before filling a bundle it shall be verified by visual examination that:

- the bundle is permitted to be filled in the country of the filling station;
- the bundle has an unexpired periodic inspection date;
- the bundle is compatible with the nature of the gas and filling pressure or filling weight;
- the frame is free from damage which may affect its mechanical integrity;
- the restraining systems that prevent the cylinders from moving are secure and the cylinders have not moved whilst in service;
- any lifting attachments and/or fork lift slots are free from damage, that may affect the integrity of the bundle;
- the manifold and pipework are securely attached to the frame and are undamaged;
- flexible hoses, where fitted, are free from damage to any reinforcement braiding;
- the visible surfaces of the cylinders are free from any signs of dents, cuts, gouges, fire damage or any other signs of damage. Rejection criteria shall be applied in accordance with EN 1968, EN 1802 or prEN ISO 11623, as appropriate. Where any cylinder is damaged the cylinder bundle shall not be filled but shall be identified and shall be removed from service for corrective action. In the case of fire damage the bundle shall be disassembled and all cylinders shall be inspected and any suspect cylinders shall be revalidated or rejected;
- the bundle does not show any signs of having been immersed in water or other liquids (e.g. cylinders covered in mud or seaweed) or any signs of tampering (e.g. loosened bolts, missing panels);
- the cylinder valves if fitted are all in the open position;
- the main outlet valve is free from contamination and is undamaged and is the correct thread for the gas to be filled;
- where appropriate any safety devices such as relief valves or bursting discs are in place and have not been damaged;
- the necessary data specified in prEN 13769 is permanently marked or labelled on the bundle;
- in the case of liquefied gases the tare weight and maximum permissible filling weight are legible.

Additionally a check of the main outlet valve shall be carried out to ensure that the valve operates properly.



Before filling it shall be verified that the bundle is free from any internal contamination which may affect its integrity by ensuring that the bundle has a positive residual pressure and, for liquefied gases, by checking the weight against the tare weight of the bundle.

#### **4.2 Inspection during filling** 充装过程中的检验

During filling of the bundle it shall be verified that no apparent leaks exist. Particular attention shall be paid to bundles containing toxic, flammable or pyrophoric gases.

#### **4.3 Inspection after filling** 充装后的检验

Upon completion of the filling of the bundle it shall be verified that:

- the bundle has not been over filled. For bundles filled by pressure the pressure shall be corrected against the reference temperature. For bundles filled by weight, the weight of the full bundle shall be checked against the maximum permissible weight by the use of a scale suitable for the weight of the bundle;
- the cylinder bundle has been correctly labelled;
- the main outlet valve is not leaking;
- no apparent leaks exist from the bundle;
- cylinder valves that need to be closed for transport in accordance with transport regulations, have been closed.

## Bibliography

参考文献

EN 12755, *Transportable gas cylinders — Filling conditions for acetylene bundles.*

移动式气瓶——乙炔气瓶组充装条件