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Cylinders for acetylene — Basic requirements —

Part 1:
Cylinders without fusible plugs

Bouteilles pour acétylène — Exigences de base —

Partie 1: Bouteilles sans bouchons fusibles

Reference number
ISO 3807-1:2000(E)

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 3.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this part of ISO 3807 may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

International Standard ISO 3807-1 was prepared by Technical Committee ISO/TC 58, *Gas cylinders*.

This first edition, together with ISO 3807-2, cancels and replaces ISO 3807:1977, which has been technically revised.

ISO 3807 consists of the following parts, under the general title *Cylinders for acetylene — Basic requirements*:

- *Part 1: Cylinders without fusible plugs*
- *Part 2: Cylinders with fusible plugs*

Annexes A to E form a normative part of this part of ISO 3807.

Introduction

There are 2 types of acetylene cylinders working safely in certain parts of the world:

- acetylene cylinders designed with a test pressure of at least 60 bar gauge and without fusible plugs or any other safety devices;
- acetylene cylinders designed to a test pressure of at least 52 bar gauge, fitted with fusible plugs or other safety devices which release the gas and hence reduce the pressure if the cylinder temperature increases unintentionally.

It was decided to split International Standard ISO 3807 into 2 parts and specify the basic requirements of both systems separately; the differences are found mainly in the testing requirements.

Cylinders for acetylene — Basic requirements —

Part 1:
Cylinders without fusible plugs

1 Scope

This part of ISO 3807 specifies the basic requirements for acetylene cylinders without fusible plugs or other safety devices with a maximum nominal water capacity of 150 l. It includes the procedures for type testing, production batch testing and the methods for determining the maximum permissible settled pressure in acetylene cylinders and the porosity of the porous mass. It also contains requirements for filling conditions of acetylene cylinders and bundles.

It does not include details of design for the cylinder shell; these are specified e.g. in ISO 4705, ISO 4706, ISO 9809-1 or ISO 9809-3.

2 Normative reference

The following normative document contains provisions which, through reference in this text, constitute provisions of this part of ISO 3807. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this part of ISO 3807 are encouraged to investigate the possibility of applying the most recent edition of the normative document indicated below. For undated references, the latest edition of the normative document referred to applies. Members of ISO and IEC maintain registers of currently valid International Standards.

ISO 13769:—[1], *Gas cylinders — Stamp marking.*

3 Terms and definitions

For the purposes of this part of ISO 3807, the following terms and definitions apply.

3.1
acetylene cylinder
pressure vessel, manufactured and suitable for transport of acetylene, containing a porous mass and solvent for acetylene (or solvent-free where applicable) with valve and other accessories fixed to the cylinder

NOTE 1 For solvent-free acetylene cylinders, see clause 6.

NOTE 2 When there is no risk of ambiguity, the word “cylinder” is used.

3.2
cylinder shell
pressure vessel, manufactured and suitable for receiving and containing a porous mass and to be fitted as an acetylene cylinder

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[1] To be published.