

Third edition
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Gas cylinders — Design, construction and testing of refillable seamless steel gas cylinders and tubes —

Part 1:

Quenched and tempered steel cylinders and tubes with tensile strength less than 1 100 MPa

Bouteilles à gaz — Conception, construction et essais des bouteilles à gaz et des tubes rechargeables en acier sans soudure —

Partie 1: Bouteilles et tubes en acier trempé et revenu ayant une résistance à la traction inférieure à 1 100 MPa



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Contents

	Page
Foreword	v
Introduction	vi
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Symbols	3
5 Inspection and testing	4
6 Materials	4
6.1 General requirements.....	4
6.2 Controls on chemical composition.....	4
6.3 Typical steels.....	6
6.4 Heat treatment.....	6
6.5 Failure to meet test requirements.....	6
7 Design	7
7.1 General requirements.....	7
7.2 Limitation on tensile strength.....	7
7.3 Design of cylindrical shell thickness.....	7
7.4 Design of convex ends (heads and bases).....	8
7.5 Design of concave base ends.....	10
7.6 Neck design.....	10
7.7 Foot rings.....	11
7.8 Neck rings.....	11
7.9 Design drawing.....	11
8 Construction and workmanship	11
8.1 General.....	11
8.2 Wall thickness.....	11
8.3 Surface imperfections.....	11
8.4 Ultrasonic examination.....	11
8.5 Out-of-roundness.....	12
8.6 Mean diameter.....	12
8.7 Straightness.....	12
8.8 Verticality and stability.....	12
8.9 Neck threads.....	12
9 Type approval procedure	13
9.1 General requirements.....	13
9.2 Prototype tests.....	14
9.2.1 General requirements.....	14
9.2.2 Pressure cycling test.....	15
9.2.3 Base check.....	15
9.2.4 Bend test and flattening test.....	15
9.2.5 Torque test for taper thread only.....	17
9.2.6 Shear stress calculation for parallel threads.....	17
9.3 Type approval certificate.....	17
10 Batch tests	17
10.1 General requirements.....	17
10.2 Tensile test.....	19
10.3 Impact test.....	20
10.4 Hydraulic burst test.....	22
10.4.1 Test installation.....	22
10.4.2 Test conditions.....	23

This is a preview of "ISO 9809-1:2019". [Click here to purchase the full version from the ANSI store.](#)

10.4.3	Interpretation of test results.....	24
10.4.4	Acceptance criteria.....	24
11	Tests/examinations on every cylinder.....	25
11.1	General.....	25
11.2	Hydraulic test.....	25
11.2.1	Proof pressure test.....	25
11.2.2	Volumetric expansion test.....	25
11.3	Hardness test.....	25
11.4	Leak test.....	26
11.5	Capacity check.....	26
12	Certification.....	26
13	Marking.....	26
Annex A	(normative) Description and evaluation of manufacturing imperfections in seamless gas cylinders.....	27
Annex B	(normative) Ultrasonic examination.....	42
Annex C	(informative) Example of type approval certificate.....	48
Annex D	(informative) Example of acceptance certificate.....	49
Annex E	(informative) Bend stress calculation.....	52
Annex F	(informative) Chemical compositions of internationally-recognized steel.....	53
Annex G	(informative) An example of shear strength calculation for parallel threads.....	54
Bibliography	56

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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.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 58, *Gas cylinders*, Subcommittee SC 3, *Cylinder design*.

This third edition cancels and replaces the second edition (ISO 9809-1:2010), which has been technically revised. The changes compared to the previous edition are as follows:

- water capacity extended from below 0,5 l and up to and including 450 l;
- batch size for tubes now introduced;
- bend test retained only for prototype tests;
- test requirements for check analysis (tolerances modified);
- new test requirements for threads introduced including an informative [Annex G](#);
- original European Annexes now incorporated into the body of this document;
- [Annex A](#) "Manufacturing imperfections" now aligned with ISO/TR 16115.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

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Introduction

This document provides a specification for the design, manufacture, inspection and testing of a seamless steel cylinder and tube. The objective is to balance design and economic efficiency against international acceptance and universal utility.

ISO 9809 (all parts) aims to eliminate existing concerns about climate, duplicate inspections and restrictions because of a lack of definitive International Standards.

This document has been written so that it is suitable to be referenced in the UN Model Regulations^[7].