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Second edition
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Gas cylinders — Refillable seamless steel tubes of water capacity between 150 l and 3000 l — Design, construction and testing

Bouteilles à gaz — Tubes en acier sans soudure rechargeables d'une contenance en eau de 150 l à 3000 l — Conception, construction et essais



Reference number
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Contents

	Page
Foreword	v
Introduction	vi
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Symbols	2
5 Inspection and testing	3
6 Materials	3
6.1 General requirements.....	3
6.2 Controls on chemical composition.....	4
6.3 Heat treatment.....	5
6.4 Mechanical properties.....	5
6.5 Failure to meet test requirements.....	5
7 Design	6
7.1 Calculation of cylindrical shell thickness.....	6
7.2 Design of tube ends.....	6
7.3 Design drawing.....	7
8 Construction and workmanship	7
8.1 General.....	7
8.2 Surface imperfections.....	7
8.3 Ultrasonic examination.....	7
8.4 End closure (fitting).....	7
8.5 Dimensional tolerances.....	7
8.5.1 Out-of-roundness.....	7
8.5.2 Outside diameter.....	7
8.5.3 Straightness.....	8
8.5.4 Eccentricity.....	8
8.5.5 Length.....	8
8.5.6 Water capacity.....	8
8.5.7 Mass.....	8
9 Type approval procedure	9
9.1 General requirements.....	9
9.2 Prototype tests.....	9
9.3 Type approval test report.....	10
9.4 Type approval certificate.....	10
10 Batch tests	10
10.1 General requirements.....	10
10.2 Mechanical tests.....	10
10.2.1 General requirements.....	10
10.2.2 Tensile test.....	11
10.2.3 Impact testing.....	11
10.3 Interpretation of results.....	11
11 Tests on every tube	11
11.1 General.....	11
11.2 Hydraulic test.....	12
11.2.1 Proof pressure test.....	12
11.2.2 Volumetric expansion test.....	12
11.3 Hardness testing.....	12
11.4 Visual inspection.....	13

This is a preview of "ISO 11120:2015". [Click here to purchase the full version from the ANSI store.](#)

11.5	Dimensional inspection.....	13
11.5.1	Thickness.....	13
11.5.2	Diameter and length.....	13
11.5.3	Water capacity and mass.....	13
11.5.4	Neck threads and openings.....	13
11.6	Ultrasonic non-destructive test.....	13
12	Special requirements for tubes for embrittling gases.....	14
12.1	General.....	14
12.2	Materials.....	14
12.3	Design.....	14
12.4	Construction and workmanship.....	14
12.4.1	General.....	14
12.4.2	Surface imperfections.....	14
12.5	Mechanical tests.....	15
12.5.1	Tensile and impact tests.....	15
12.5.2	Hardness test.....	15
13	Inspection certificate.....	15
14	Marking.....	16
Annex A	(informative) Typical chemistry groupings for seamless steel tubes.....	17
Annex B	(normative) Ultrasonic examination.....	18
Annex C	(informative) Description and evaluation of manufacturing imperfections and conditions for rejection of seamless steel tubes at time of final inspection by the manufacturer.....	23
Annex D	(informative) Acceptance certificate.....	29
Annex E	(informative) Type approval certificate.....	31
Annex F	(informative) Bend stress calculation.....	32
Bibliography	33

This is a preview of "ISO 11120:2015". [Click here to purchase the full version from the ANSI store.](#)

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 on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT), see the following URL: [Foreword — Supplementary information](#).

The committee responsible for this document is ISO/TC 58, *Gas cylinders*, Subcommittee SC 3, *Cylinder design*.

This second edition cancels and replaces the first edition (ISO 11120:1999), which has been technically revised by the following:

- [Annex A](#) "Typical chemistry groupings for seamless steel tubes" is informative;
- nickel chromium molybdenum steel has been added in [6.1.1](#) and [Annex A](#) as Group V;
- reduction of maximum sulfur content in [6.2.2](#) from 0,020 % to 0,010 %; also the sum of sulfur and phosphorus is reduced from 0,030 % to 0,025 %;
- the modification of ultrasonic provisions for ultrasonic examination in [8.3](#) to include ultrasonic examination for wall thickness and for imperfections also on the supplied tubing;
- "Type Approval Procedure" has been introduced in [Clause 9](#);
- the provisions for design of tubes for embrittling gases have been revised.

It also incorporates ISO 11120:1999/Amd 1:2013.

Introduction

This International Standard provides a specification for the design, manufacture, inspection and testing of tubes at the time of manufacture for worldwide usage. The objective is to balance design and economic efficiency against international acceptance and universal utility.

This International Standard aims to eliminate concern about climate, duplicate inspections and restrictions currently existing because of lack of definitive International Standards. It does not reflect on the suitability of the practice of any nation or region.

This International Standard addresses the general requirements on design, construction and initial inspection and testing of pressure receptacles of the United Nations *Recommendations on the Transport of Dangerous Goods: Model Regulations*.

It is intended to be used under a variety of regulatory regimes, but it is suitable for use with the conformity assessment system for UN pressure receptacles of the above-mentioned Model Regulations.