

First edition
2018-05

AMENDMENT 1
2021-05

**Gas cylinders — Seamless steel
and seamless aluminium-alloy gas
cylinders and tubes — Periodic
inspection and testing**

AMENDMENT 1

*Bouteilles à gaz — Bouteilles et tubes à gaz en acier et en alliages
d'aluminium, sans soudure — Contrôles et essais périodiques*

AMENDEMENT 1



Reference number
ISO 18119:2018/Amd.1:2021(E)

© ISO 2021



COPYRIGHT PROTECTED DOCUMENT

© ISO 2021

All rights reserved. Unless otherwise specified, or required in the context of its implementation, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Email: copyright@iso.org
Website: www.iso.org

Published in Switzerland

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 4, *Operational requirements for gas cylinders*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 23, *Transportable gas cylinders*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

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.

STANDARDSISO.COM : Click to view the full PDF of ISO 18119:2018/Amd 1:2021

Gas cylinders — Seamless steel and seamless aluminium-alloy gas cylinders and tubes — Periodic inspection and testing

AMENDMENT 1

Clause 4

Add the following to the list of abbreviated terms and symbols:

a/t flaw depth ratio (in per cent)

8.1

Replace the second paragraph with the following:

Particular attention shall be given to cylinders containing flammable, oxidizing, corrosive or toxic gases to eliminate risks at the internal inspection stage. See Annex C for a list of gases that are corrosive to steel cylinder material.

Table A.1

Replace footnote f) with the following:

Corrosiveness is with reference to human tissue (see ISO 13338) and NOT cylinder material (e.g. as indicated in Annex C for steel).

B.1

Replace the fourth paragraph with the following:

If the defect size is such that it has reached limits of depth or extent, the remaining wall thickness shall be checked with an ultrasonic device. The wall thickness may be less than the minimum guaranteed wall thickness, when authorized by the competent authority taking into consideration the severity of the defect and safety factors. ISO/TR 22694, and [Figures B.6](#) and [B.7](#) may be used for guidance to evaluate the acceptable size of the defect. When the flaw depth ratio (a/t) is less than or equal to 5 %, the flaw length may be extended for the parallel length of the cylinder.

B.3.3, Table B.3

In the third column (Linear flaws) for seamless steel cylinders, add a second paragraph as follows:

Depth less than or equal to $0,05 t_m$ whatever the length (see [Figure B.6](#)).

In the third column (Linear flaws) for seamless aluminium-alloy cylinders, add a second paragraph as follows:

Depth less than or equal to $0,05 t_m$ whatever the length (see [Figure B.7](#)).

B.3.3, Figure B.6

Replace [Figure B.6](#) with the following:

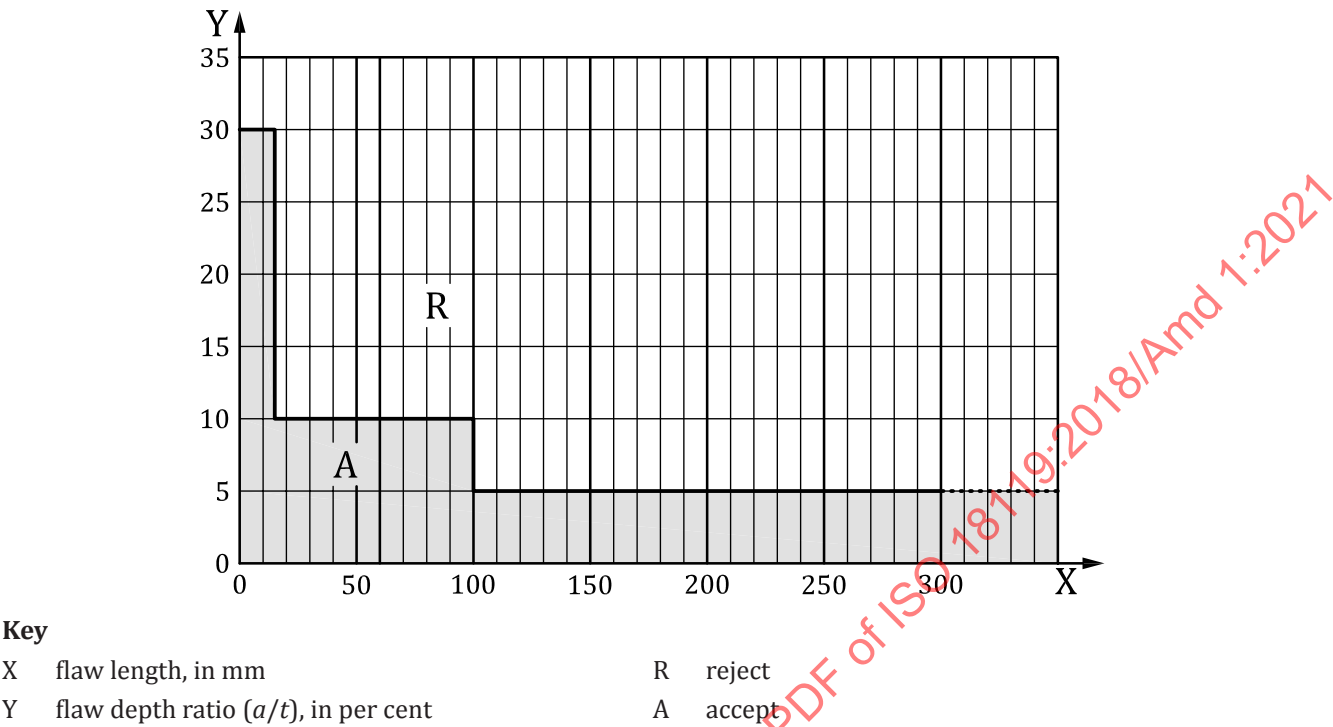


Figure B.6 — Maximum allowable imperfection sizes for seamless steel cylinders of various compositions