International Standard

ISO 19232-3

Third edition
2025-07

Non-destructive testing — Image quality of radiographs —

Part 3: Minimum image quality values

Essais non destructifs — Qualité d'image des radiogrammes — Partie 3: Indices de qualité d'image minimaux

Reference number
ISO 19232-3:2025(en)

© ISO 2025



COPYRIGHT PROTECTED DOCUMENT

© ISO 2025

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

Contents

Page

Foreword ..... **iv**

1 Scope **1**

2 Normative references **1**

3 Terms and definitions **1**

4 Image quality values **2**
4.1 Single-wall radiography 2
4.2 Double-wall radiography 2

5 Arrangement of IQI **3**

6 Determination of image quality value **3**

7 Reduction of minimum image quality values for gamma radiography **3**

8 Requirements for minimum IQI values **4**
8.1 General 4
8.2 Minimum IQI values for single-wall radiographic techniques; IQI on source side 4
8.3 Minimum IQI values for double-wall radiographic techniques; double-image evaluation (DWDI); IQI on source side 6
8.4 Minimum IQI values for double-wall radiographic techniques; single-image (DWSI) or double-image (DWDI) evaluation; IQI on detector side 8

© ISO 2025 – All rights reserved

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).

ISO draws attention to the possibility that the implementation of this document may involve the use of (a) patent(s). ISO takes no position concerning the evidence, validity or applicability of any claimed patent rights in respect thereof. As of the date of publication of this document, ISO had not received notice of (a) patent(s) which may be required to implement this document. However, implementers are cautioned that this may not represent the latest information, which may be obtained from the patent database available at www.iso.org/patents. ISO shall not be held responsible for identifying any or all such patent rights.

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 135, *Non-destructive testing*, Subcommittee SC 5, *Radiographic testing*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 138, *Non-destructive testing*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This third edition cancels and replaces the second edition (ISO 19232-3:2013), which has been technically revised.

The main changes are as follows:

— title change from: “image quality classes” to “Minimum image quality values”;

— additions to definitions 3.2 and 3.3;

— renamed Clause 4 “Image quality values”;

— revision of Clause 7 “Reduction of image quality values for gamma radiography”;

— renamed Clauses 8, 9, 10, 11, 12 and 13 for better readability and traceability;

— updated nominal thickness values for IQI values W2 to W5 in table 1;

— updated titles of all tables for better readability and traceability;

— editorial changes.

A list of all parts in the ISO 19232 series can be found on the ISO website.

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.

© ISO 2025 – All rights reserved

Non-destructive testing — Image quality of radiographs —

Part 3:
Minimum image quality values

1 Scope

This document specifies the minimum image quality values (using IQIs) to ensure a uniform radiographic image quality. This document specifies the minimum IQI values for the two testing classes, A and B, of radiographic techniques as specified in ISO 5579. This document is applicable to the two types of image quality indicators as detailed in ISO 19232-1 for wire-type IQIs and ISO 19232-2 for step/hole-type IQIs, and for the two testing, classes A and B, as specified in ISO 5579.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 5579, *Non-destructive testing — Radiographic testing of metallic materials using film and X- or gamma rays — Basic rules*

ISO 5580, *Non-destructive testing — Industrial radiographic illuminators — Minimum requirements*

ISO 17636 (all parts), *Non-destructive testing of welds — Radiographic testing*

ISO 19232-1, *Non-destructive testing — Image quality of radiographs — Part 1: Determination of the image quality value using wire-type image quality indicators*

ISO 19232-2, *Non-destructive testing — Image quality of radiographs — Part 2: Determination of the image quality value using step/hole-type image quality indicators*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 5579 and the following apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at https://www.electropedia.org/

3.1
image quality indicator
IQI
device comprising a series of elements of graded dimensions which enable a measure of the image quality to be obtained

Note 1 to entry: The elements of IQI are commonly wires or steps with holes.

[SOURCE: ISO 19232-1:2013, 3.2]

© ISO 2025 – All rights reserved