



**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 23901.2-2019

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

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Foreword

GB/T 23901 "Non-destructive testing - Image quality of radiographs" is divided into 5 parts:

- Part 1: Determination of the image quality value using wire-type image quality indicators;
- Part 2: Determination of the image quality value using step/hole-type image quality indicators;
- Part 3: Image quality classes;
- Part 4: Experimental evaluation of image quality values and image quality tables;
- Part 5: Determination of the image quality unsharpness and basic spatial resolution value using duplex wire-type image quality indicators.

This Part is Part 2 of GB/T 23901.

This Part is drafted in accordance with the rules given in GB/T 1.1-2009.

This Part replaces GB/T 23901.2-2009 "Non-destructive testing - Image quality of radiographs - Part 2: Image quality indicators (step/hole type) - Determination of image quality value". As compared with GB/T 23901.2-2009, the main changes are as follows:

- Modify normative references (See Clause 2; Clause 2 of the 2009 edition);

- Modify terms and definitions (See Clause 3; Clause 3 of the 2009 edition);
- CHANGE the expression in Chinese of "Image quality of radiographs"
[Translator note: There is another expression for "Image quality of radiographs" in Chinese];
- CHANGE the expression in Chinese of "image quality value" [Translator note: There is another expression for "image quality value" in Chinese];
- CHANGE "film" to "detector".

This Part, using translation method, is identical to ISO 19232-2:2013 "Non-destructive testing - Image quality of radiographs - Part 2: Determination of the image quality value using step/hole-type image quality indicators".

The documents of China which have a consistent correspondence with the international documents normatively referenced in this Part are as follows:

- GB/T 19802-2005 Non-destructive testing - Industrial radiographic illuminators - Minimum requirements (ISO 5580:1985, IDT)
- GB/T 23901.4-2019 Non-destructive testing - Image quality of radiographs - Part 4: Experimental evaluation of image quality values and image quality tables (ISO 19232-4:2013, IDT)
- GB/T 27050.1-2006 Conformity assessment - Suppliers declaration of conformity - part 1: General requirements (ISO/IEC 17050-1:2004, IDT)

This Part was proposed by and shall be under the jurisdiction of National Technical Committee 56 on Non-destructive Testing of Standardization Administration of China (SAC/TC 56).

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Shanghai Aerospace Equipment Manufacturer Co., Ltd.; Sichuan Aerospace Chuannan Fire Work Technology Co., Ltd.; China Nuclear Power Engineering Co., Ltd.; Shanghai Feitian Zhongzhi Technology Co., Ltd.; Zhejiang Academy of Special Equipment Science; Aerospace Research Institute of Materials & Processing Technology; CITIC Dicastal Co., Ltd.; Shanghai Acoustics Laboratory, Chinese Academy of Sciences; Ningbo Special Equipment Inspection and Research Institute; Shanghai Aerospace Control Technology Institute; NDT Testing Technology (Shanghai) Co., Ltd.

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The previous editions of the standard replaced by this Part were released as follows:

- GB/T 23901.2-2009.

Non-destructive testing - Image quality of radiographs

- Part 2: Determination of the image quality value

using step/hole-type image quality indicators

1 Scope

This Part of GB/T 23901 specifies a device and a method for the determination of the image quality of radiographs using step/hole-type image quality indicators.

This Part applies to the determination of the image quality value of radiographs using step/hole-type image quality indicators.

2 Normative references

The following documents are indispensable for the application of this document.

For the dated references, only the editions with the dates indicated are

applicable to this document. For the undated references, the latest edition

(including all the amendments) are applicable to this document.

ISO 5580 Non-destructive testing - Industrial radiographic illuminators -

Minimum requirements

ISO/IEC 17050-1 Conformity assessment - Supplier's declaration of
conformity - Part 1: General requirements

ISO 19232-4 Non-destructive testing - Image quality of radiographs - Part 4:

Experimental evaluation of image quality values and image quality tables

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1 Image quality

Characteristic of a radiographic image which determines the degree of detail it shows.

3.2 Image quality indicator; IQI

Device comprising a series of wires or steps with holes of graded dimensions

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