

ICS 19.100
CCS J 04



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

GB/T 21356-2008

**Non-destructive testing -- Qualification and long-term stability
of computed radiology systems**

无损检测 计算机射线照相系统的长期稳定性与鉴定方法

(English Translation)

Issued on: January 14, 2008

Implemented on: May 1, 2008

Issued by: Standardization Administration of China

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Foreword

This revised standard adopts ASTM E2445-05 "long-term stability and identification of computed radiography systems" (in English).

This standard redrafted according to ASTM E2445-05.

Taking into account China's national conditions, when using ASTM E2445-05, we made some changes in this standard. About the technical differences are as follows.

- a) the normative references E1316 changes to our standard GB/T 12604.2;
- b) the normative references E1815 changes to our standard GB/T 19348.1;
- c) the normative references E2446 changes to our standard GB/T 21355;
- d) Remove the normative references E2007 and E2033.

For ease of use, this standard also made the following editorial changes.

- a) "the method" be replaced by "this standard";
- b) according to GB/T 1.1-2000 format specified requirements on the part number and title bar has been modified;
- c) the use of GB/T 1.1-2000 specified key words in Chapter 2 and Chapter 3.

Appendix A of this standard is an informative annex.

The standard proposed by China Machinery Industry Federation.

The standard non-destructive testing by the National Standardization Technical Committee (SAC/TC56) centralized.

This standard was drafted. Shanghai Suzhou US detection equipment Kodak Co., Ltd. China Special Equipment Inspection and Research Center, Shanghai Science and Technology Star Information consulting firm, Shanghai Institute of Materials.

1 Scope

This standard specifies the computed radiography system (CR) of the basic parameters, in order to guarantee a satisfactory non-destructive testing and its weight Complex results.

This standard describes the industrial computer radiography system reviews, which aimed for image quality, as well as a scanner or IP-based the impact on the system to evaluate the image quality to ensure that meet user requirements and to maintain long-term stability testing.

Each assay described in this standard may be used for certain specific gauge to complete. Test system controls carried out, is the use of Dedicated sample or CR plate (Appendix A), a specific decision by the user. Computer photographic test, the standards specified in this "User Testing" can be detected by the user during the operation, the use of appropriate space to conduct their own, these tests with the use of the system and the scope of the measured material Material to adapt. Recession image uniformity and erasing test capacity, should also be part of the system control. All other inspection and quality Test measurement capability related projects, shall be CR equipment manufacturer to implement and certify.

This standard does not raise safety-related requirements. Responsibility of the user of this standard in advance in accordance with the applicable statutory provisions, the development of appropriate Implementation of health and safety rules and follow the execution time for testing.

2 Normative references

The following documents contain provisions which, through reference in this standard and become the standard terms. For dated references, subsequent Amendments (not including errata content) or revisions do not apply to this standard, however, encourage the parties to the agreement are based on research Whether the latest versions of these documents. For undated reference documents, the latest versions apply to this standard.

GB/T 12604.2 Terminology for nondestructive testing radiographic testing (GB/T 12604.2-2005, ISO 5576:1997, IDT) GB/T 19348.1 destructive testing - Industrial radiographic film - Part 1. Classification of film systems for industrial radiography (GB/T 19348.1-2003, ISO 11699-1:1998, IDT) GB/T 21355 Classification destructive testing computer radiography system ASTM E1647 radiographic contrast sensitivity measuring method ASTM E2002 radiographic image clarity measurement method does not always

3 Terms and Definitions

GB/T 12604.2 and established the following terms and definitions apply to this standard.

Beyond the Nyquist (Nyquist) frequency (intervals are determined by the pixel) sample

preset high spatial frequency signal, when the lower spatial frequencies Reflected into the image.

The storage phosphor imaging plate (IP), the corresponding reading device (scanner or reader) and software, a complete system consisting of. It Converting the information into a digital image on IP.

CR systems consist of a specific image storage phosphor panels, the characteristics shown in Table 1 may be SNR (signal-to-noise ratio) based on the value of