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

GB/T 26834-2011

**Non-destructive testing instruments -- Measurement of
effective focal spot size of mini and micro focus X-ray tubes**

无损检测仪器 小焦点及微焦点X射线管有效焦点尺寸测量方法

(English Translation)

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Foreword

This standard was drafted in accordance with GB/T 1.1-2009 given rules.

This standard corresponds to British Standard BSEN12543-5:1999 "focus behavior of industrial X-ray apparatus for non-destructive testing of the first Part 5. Small focus and micro focus X-ray tube effective focal spot size measurement method ", with its main technical differences are as follows.

- Increased Chapter 3 Terms and definitions;
- Increased in Chapter 2, normative references; direct reference to the latest version of the European standard corresponding to our standards.

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

- Use the "standard" instead of the "European standard";
- Remove European standard BSEN12543-5:1999 Foreword;
- Remove European standard BSEN12543-5:1999 Introduction;
- With Chinese decimal comma instead of the original English.

The standard proposed by China Machinery Industry Federation.

This standard by the National Standardization Technical Committee tester (SAC/TC122) centralized.

1 Scope

The standard provides a clear edge X-ray tube voltage 225kV X-ray is not greater than the effective focal spot size of $5\mu\text{m} \sim 300\mu\text{m}$ Radiographic measurements.

X-ray image quality and resolution of the image depends on the characteristics of focus, focus, image quality relies on two-dimensional plane of the object density distributed.

X-ray radiographic techniques used for specific purposes.

Note: By using the same method can be negotiated to a higher voltage kV X-ray tube, but measurement accuracy is poor.

2 Normative references

The following documents for the application of this document is essential. For dated references, only the dated version suitable for use herein Member. For undated references, the latest edition (including any amendments) applies to this document.

GB/T 12604.2-2005 Terminology for nondestructive testing radiographic testing (ISO 5576:1997, IDT) GB/T 19348.1-2003 destructive testing - Industrial radiographic film - Part 1. Classification of film systems for industrial radiography (ISO 11699-1:1998, IDT)

3 Terms and Definitions

Terms and definitions GB/T 12604.2 established in this document apply.

Test Method 4

4.1 Principle and equipment

This method is an indirect measure of geometric clarity by measuring the focal spot size. For this reason a clear edge imaging either in film or ray the image forming apparatus have adopted a high geometric magnification.

If using film measurement requires the following equipment.

- Test substance;
- Film, the minimum 10cm x 10cm, without sensitization;
- Low absorbent material film cartridge (example. polyethylene);
- Film clip;
- Film processing unit;
- Can be read density greater than 3.0 micrometer densitometer, and there $d1 \leq 10\mu\text{m}$ input diaphragm.

If ray imaging device measurements require the following equipment.

--- Test substance;