

ICS 19.100
CCS J 04



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

GB/T 25758.4-2010

**Non-destructive testing -- Characteristics of focal spots in
industrial X-ray systems for use in non-destructive testing --
Part 4: Edge method**

无损检测 工业X射线系统焦点特性 第4部分：边缘方法
(English Translation)

Issued on: December 23, 2010

Implemented on: October 1, 2011

Issued by: Standardization Administration of China

Table of Contents

- Foreword
- Introduction
- 1 Scope
- 2 Normative references
- 3 Terms and Definitions
- 4.1 Principle and equipment

Foreword

GB/T 25758 "non-destructive testing of industrial X-ray system focus feature" is divided into five parts.

- Part 1. Scanning method;
- Part 2. Pinhole camera radiographic method;
- Part 3. Slit camera radiographic method;
- Part 4. Edge method;
- Part 5. Measurement of the effective focal spot size smaller focus and micro focus X-ray tube.

This section GB/T Part of 425,758.

This section identical with EN12543-4:1999 "Non-destructive testing of industrial X-ray system focus characteristics - Part 4. Edge method" (In English).

This section is equivalent translation EN12543-4:1999.

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

- "This European standard" be replaced by "this section";
- Remove the EN standard foreword;
- With a decimal point instead of a comma as the decimal point, ",";
- With GB/T 1.1-2000 predetermined key words instead of the EN standard introductory phrase.

Appendix A of this section is an informative annex.

This part of the National NDT Standardization Technical Committee (SAC/TC56) and focal

points.

This section is drafted. Haitai Division Inspection Technologies Ltd., Shanghai IAC NDT Technology Co., Ltd., Shanghai Research Institute of Materials, Shanghai - Friends Industrial Co., Ltd., Shanghai Wei Cheng Banda Detection Technology Co., Ltd., GE Sensing & Inspection Technologies (Shanghai) Co., Ltd., Dan East Austrian-ray machines Limited, Shandong Institute of Light Industry.

Introduction

In order to meet the needs of different focal spot size measured in GB/T 25758.1 ~ 25758.5, the five different methods are described.

Scanning method (GB/T 25758.1) applies constant focal spot size and intensity distribution of the occasion, for example, for calibration and image processing process.

Radiographic methods (GB/T 25758.2 and GB/T 25758.3) is a conventional technique, in order to verify that the primary purpose for the highest to 200kV occasions.

When the pinhole camera can not be used and slit edge method (GB/T 25758.4) may be effective, this method is suitable for simple Occasions.

In order to take into account micro-focus system, GB/T 25758.5 \u200b\u200bproposes a special approach.

Non-destructive testing of industrial X-ray system focus feature Part 4. Edge method

1 Scope

This section GB/T 25758 specifies the use of sharp edges radiographs to check the tube voltage up to 500kV Industrial Focus size greater than 0.5mm method of X-ray system.

X-ray image of the image quality and resolution depends largely on the characteristics of focus. Focus image quality based on the two-dimensional plane of the target intensity Distribution.

Edge method for the focus calibration in field conditions is particularly effective to detect changes in focus. This method can not be used to focus size Absolute measurement. Absolute measurement spot size is given in Appendix A.

2 Normative references

The following documents contain provisions which, through reference GB/T 25758 in this section constitute provisions of this section. For dated reference documents Member, all subsequent amendments (not including errata content) or revisions do not apply to this section, however, encouraged to reach under this section Parties to research agreement to use the latest versions of these documents. For undated reference documents, the latest

versions apply to this section.

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

1) This standard will be revised GB/T release (identical with ISO 11699-1 19348.1-2003 on the basis of 2008, and EN584-1:1994 equivalent).

GB/T 19802 Non-destructive testing - Industrial radiographic film viewer Minimum requirements (GB/T 19802-2005, ISO 5580. 1985, IDT) GB/T 25758.1 destructive testing of industrial X-ray system focus characteristics - Part 1. Scanning method (GB/T 25758.1-2010, EN12543-1:1999, IDT)

3 Terms and Definitions

The following terms and definitions apply to this part of the GB/T 25758 of.

X-ray emission from the region to see the measuring device X-ray tube anode.

[GB/T 25758.1]

Test Method 4

4.1 Principle and equipment

This method is an indirect measurement method by measuring geometric clarity to get focus size. For this reason, the use of a relatively high discharge geometry the sharp edges large magnification image on film.

Measurement requires the following equipment.

- Minimum length of 24cm without intensifying screen film;
- From a thin plastic or aluminum film cartridge;
- Type L and W;