ICS 01.040.19
CCS J04

NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB/T 12604.8-2014

Replacing GB/T 12604.8-1995

Non-destructive testing-Terminology-Terms used in neutron testing

无损检测 术语 中子检测

Issued on: May 6, 2014 **Implemented on: December 1, 2014**

Issued by: General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China;
Standardization Administration of China

Table of Contents

Foreword

This standard was drafted in accordance with GB/T 1.1-2009 given rules. This standard replaces GB/T 12604.8-1995 "Terminology for nondestructive testing for neutron detection." This standard and GB/T 12604.8-1995 compared to the main changes are as follows:

--- Modify some of the terms and definitions (see Chapter 2; Chapter 4 1995 edition - Chapter 2). The standard non-destructive testing by the National Standardization Technical Committee (SAC/TC56) and focal points. This standard was drafted. Haitai Division Inspection Technologies Co., Ltd., Shanghai Research Institute of Materials, Shanghai Meida new detection equipment Co., Ltd., Sea Aerospace Power Technology Engineering Company Limited, China Aerospace Science and Technology Corporation in South Sichuan Machinery Factory, Shanghai Key Laboratory of Engineering Materials Evaluation Room, Shanghai Institute of Space Propulsion. The main drafters of this standard. Xu Guozhen, Jinyu Fei, Zhang Zheng, Li Li, Wang Bin, Zhao, Zhang YIMING, Chen Yiwei. This standard replaces the standards previously issued as follows:

--- GB/T 12604.8-1995. Terminology for nondestructive testing neutron detection

1 Scope

GB/T 12604.8-2014 is the Chinese national standard on non-destructive testing-terminology-terms used in neutron testing, in the field of generalities, terminology and documentation. The /T suffix marks it as a recommended standard: it is not compulsory by itself, but it becomes binding as soon as a contract, a tender or a customer specification calls it up - which in practice is how most foreign buyers meet it. It was issued on 6 May 2014 by the General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China; Standardization Administration of China, and has been in force since 1 December 2014. Classification: ICS 01.040.19, CCS J04. This page is published from the official record of the standard held by the Chinese standards

administration: the identification, the dates, the classification and the issuing body are taken from there. The clause text, the tables and the numeric limits are in the document itself, which is delivered complete in English translation.

This standard defines the technical term for neutron detection.

2 Terms and definitions

2.1 Activate activation activation Bombarded by neutrons or other material particles and the process of becoming artificial radioactive substances.

2.2 Attenuation coefficient attenuationcoefficient When the beam passes through the material, the relative rate of change in its strength. See the linear attenuation coefficient (2.15) and the mass attenuation coefficient (2.16).

2.3 Attenuation sectional attenuationcrosssection The probability of neutron nuclei is completely absorbed, with barns (barn) represented.

2.4 Barns barn A method for showing cross-sectional area of \u200b\u200bcore units. 1barn = 10-24cm2.

2.5 Cadmium than cadmiumratio Under the same conditions and in response to neutron detector coating thickness than the response of a particular layer of cadmium.

2.6 Cassette cassette In the exposure process, the converter is used to place the film or film screen and maintain a non-transmitting device in close contact.

2.7 Contrast contrastagent A way to add to the component, through the selective absorption of incident radiation to enhance the contours of the details.

2.8 Conversion screen conversionscreen A method of forming a neutron beam radiation or light converted to a device, and then make this light ray or radiographic film exposure.

2.9 Cross section crosssection Depending on the collision probability based on nuclear and particle reactions occurring in the calculated cross-sectional area. It is not necessarily equal to the geometric cross-sectional area pir2. section Unit area with barns (barn) represented.

2.10 Direct exposure imaging directexposureimaging In the direct exposure of the imaging method, the image conversion screen and recording simultaneously irradiated neutron beam.