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

GB 16757-2016

Replacing GB 16757-1997

Protective clothing -- X-ray protective clothing

防护服装 X射线防护服

(English Translation)

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Table of Contents

Introduction

1 Scope

2 Normative references

3 Terms and definitions

4 Classification and specifications

4.1 Category

4.2 Size

5 Requires

5.1 Design

5.2 Protective material

5.3 Within the outer cover material

5.4 5 seam strength

6 Test methods

6.1 Protective material

6.2 Within the outer cover material

6.3 8 seam strength

8 6.4 Specifications

7 Inspection rules

7.1 Inspection type

7.2 Factory inspection

7.3 Type inspection

8 Logo should provide relevant information package

8.1 Identifies

8.2 Should provide relevant information

8.3 Packaging

9 Storage, transport

References

1 With laboratory equipment broad beam when

6 Experimental device when using a narrow beam of Fig.

Table 1 X-ray protective clothing Category

Table 2 X-ray protective aprons shapes and size

Table 3 X-ray protective coat shapes and size

Table 4 lead equivalent index and grade

The physical properties of protective material 4 Table

Ozone resistance protective material 4 in Table

Table 7 tensile strength and tear strength

Table 8 Lead equivalent test conditions

Table 9 X - ray tube voltage and the corresponding filter copper thickness

Table 10 factory inspection items

Table 11 type test items

Foreword

5.2.2,8.1,8.2 this standard is mandatory, the rest are recommended.

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

This standard replaces GB 16757-1997 "X-ray protective clothing", compared with GB 16757-1997, the main changes are as follows.

- Modify the terms and definitions (see Chapter 3, Section 3 of the 1997 edition);
- Modify the protective material lead equivalent level (see 5.2.2, 1997 edition Table 2.);
- Modify the protective material physical performance indicators (see 5.2.3, 1997 edition Table 3.);
- Increasing the ozone resistance protective material (see 5.2.4);
- Increasing the inner and outer cover material requirements (see 5.3);
- Increased seam strength indicator (see 5.4);
- Modify the contents of the test rule (see Chapter 7, Chapter 7, 1997);
- Modify the content of labeling and identification method of protective clothing (see 8.1, 1997 Version 8.1.);
- Modify the protective clothing products should provide the relevant information (see 8.2, version 8.2, 1997).

This standard was proposed by the State Administration of Work Safety.

The standard personal protective equipment by the National Standardization Technical Committee (SAC/TC112) centralized.

This standard was drafted. scientific research center in Heilongjiang Province, labor safety, Beijing Jin Kai radiation shield Technology Co., Ltd., Harbin Longjiang labor protection technology development company, Shanghai-day Radiation Protection Equipment Co., Ltd.

1 Scope

This standard specifies the terms and definitions of X-ray protective clothing, technical requirements, test methods and testing, labeling, packaging, transportation and storage Claim.

This standard applies to contact with X-ray personnel wearing protective clothing.

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 528 Determination of vulcanized rubber or thermoplastic rubber tensile stress-strain properties GB/T 529 Determination of vulcanized rubber or thermoplastic rubber tear strength (Trouser, angle and crescent test pieces) GB/T 531.1 vulcanized rubber or thermoplastic rubber hardness test pushed Part 1. Shore hardness method (Shore hardness) Test conditions for films and sheets. plastic 1040.3 Determination of tensile properties GB/T Part 3 GB/T 2411 plastic and hard rubber indentation hardness was measured using a durometer (Shore hardness) GB/T 3917.3 Textiles - Tear properties of fabrics - Part 3. Determination of trapezoid tear GB/T 3923.1 Part 1 textile fabric tensile properties. breaking strength and elongation measurement (strip method) GB/T 7762 vulcanized rubber or thermoplastic rubber resistant to ozone cracking static tensile test GB/T 13640 Type of protective clothing GB wear fabrics by the Martindale method - Part 2/T 21196.2 Textiles. Determination of specimen breakdown Determination of strength and elongation at break of HG/T 2580 Rubber or plastic coated fabrics stretch

3 Terms and Definitions

The following terms and definitions apply to this document.

X-ray protective clothes X-ray protective clothing with anti-body X-ray performance protective equipment.

Note: X-ray protective clothing including coats, pants, split skirt, protective aprons, gonadal protection aprons, vests, neck scarf, armband, breast shields, square, triangle Pants.

Lead equivalent Under the same irradiation conditions, having the measured equivalent protective material layer thickness of lead shielding. Symbol Pb indicate.

4.1.1 Classification by lead equivalent

I (Light) 0.25mmPb ≤ Pb 5 Requirements

5.1 Design

Design should meet the following requirements.

- a) X-ray protective clothing design should be easy to wear off, and should make the wearer himself can accurately be worn in need of protection bit Set on;
- b) protective aprons and protective coats the front panel of the protective material should be able to cover the front part of the body from neck to knee, including the entire chest and the shoulder;
- c) the width of each shoulder protective material shall not be less than 110mm, and shoulder to shoulder piece should extend at least 150mm at the back;

Each section d) protective aprons joints, without protection, should be located in a protective skirt of the rear panel;

- e) protective coat of the opening lap to be closely engaging manner should be firmly convenient overlap portion should be not less than 100mm; back protection Material has been down to the knee;

Rear direction f) in front of protective clothing should be clearly designed to prevent an error in directional protection Wear and use;

- g) should be considered in the design of protective clothing when used in conjunction with each other without prejudice.

5.2.1 General requirements

X-ray protective clothing protective material shall meet the following requirements.

- a) protective materials should look no pores, cracks, bubbles, stains, foreign bodies and Bo Hou uneven performance impact defects;
- b) effective attenuation material should be evenly distributed, and should contain a high atomic number elements such as lead, tungsten, bismuth, nickel and the like;
- c) protective clothing, protective material shall repair, splice or patch.

5.2.2 Lead equivalent

When tested in accordance with the method specified in 6.1.2, lead equivalent protective material shall comply with the requirements of Table 4, thyroid, breast and reproductive system, etc.

Lead equivalent protective material should reach 0.5mmPb ~ 1.0mmPb.

Table 4 lead equivalent indices and rating