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

GB/T 13538-2017

Replacing GB/T 13538-1992

**Electrical penetration assemblies in containment structures for
nuclear power plants**

核电厂安全壳电气贯穿件

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Quarantine of the People's Republic of China;
Standardization Administration of China**

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Foreword

This standard was drafted in accordance with the rules given in GB/T 1.1-2009. This standard replaces GB/T 13538-1992 "nuclear power plant containment electrical penetrators," compared with GB/T 13538-1992, in addition to editing The main technical changes outside the sexual changes are as follows:

- Modify the normative references (see Chapter 2,.1992 edition Chapter 2);
- Modify some terms and definitions (see Chapter 3,.1992 edition Chapter 3);
- Added "fiber" related content (see Chapter 4 ~ Chapter 10);
- Increased power and control conductor rated voltage values, and adapted to the relevant national standards (see 4.2.1);
- According to the revised equipment rated voltage, dielectric strength test frequency withstand voltage and impact withstand voltage test values were adapted Set (see 6.2.4);
- Added "electromagnetic compatibility" of the relevant content (see 6.2.11);
- Increased the "serious accident" related content (see 6.4);
- Added "partial discharge (corona) test" requirements (see 7.6);
- Added Chapter 10, contains the contents of the original Appendix A;
- The original Appendix B to Appendix A, and the content has been modified;
- Added Appendix B, Appendix C and Appendix D. This standard proposed by China National Nuclear Corporation. This standard by the National Nuclear Instrument Standardization Technical Committee (SAC/TC30) centralized. This standard was drafted by Shanghai Nuclear Engineering Research Institute Co., Ltd. The main drafters of this standard. Ma Tao, Wang Wen, Fang Wenzhi, Liu Gang. This standard replaces the standards previously issued as.

--- GB/T 13538-1992. Nuclear power plant containment electrical penetrations

1 Scope

GB/T 13538-2017 is the Chinese national standard on electrical penetration assemblies in containment structures for nuclear power plants, in the field of energy and heat transfer engineering. 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 29 December 2017 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 July 2018. Classification: ICS 27.120.20, CCS F69. 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 specifies the design, manufacture, identification, testing, installation, and in-service monitoring of the containment of nuclear power plant containment Claim. This standard applies to nuclear power plant containment electrical penetrations design, manufacture, identification, testing, installation and in-service monitoring.

2 Normative references

The following documents for the application of this document is essential. For dated references, only the dated version applies to this article Pieces. For undated references, the latest edition (including all amendments) applies to this document.

GB/T 156-2007 standard voltage

GB/T 311.1-2012 Insulating coordination Part 1. Definitions, principles and rules

GB/T 12727-2017 Nuclear power plant safety grade electrical equipment identification

GB/T 13625 nuclear power plant safety system electrical equipment seismic identification Specification for test methods for optical fibers - Part 40. Measurement methods and tests for transmission and optical characteristics Program

GB/T 15972.41-2008 Specification for optical fiber test methods - Part 41. Measurement methods and tests of transmission and optical characteristics Program

--- bandwidth Test methods for optical fibers - Part 42. Measurement methods and tests for transmission and optical properties Procedure

--- wavelength dispersion Specification for test methods for optical fibers - Part 43. Measurement methods and tests for transmission and optical characteristics

GB/T 15972.43-2008 Program

--- numerical aperture Fiber optic test methods - Specifications - Part 44. Measurement methods and tests for transmission and optical characteristics

GB/T 15972.44-2008 Program

--- cut-off wavelength Specification for optical fiber test methods - Part 45. Measurement methods and tests for transmission and optical characteristics

GB/T 15972.45-2008 Program

--- mode field diameter Specification for test methods for optical fibers - Part 46. Measurement methods and tests for transmission and optical characteristics Procedure