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

GB/T 13630-2015

Replacing GB/T 13630-1992

Design of control room of nuclear power plants

核电厂控制室设计

(English Translation)

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Foreword

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

This standard replaces GB/T 13630-1992 "nuclear power plant control room design", compared with the GB/T 13630-1992, in addition to editorial repair Change outside the main technical changes are as follows.

- Increasing the normative references (see Chapter 2, Section 2 of the 1992 edition);
- Increasing the term "instrumentation and control system" and its definition (see 3.12);
- Deleted the term "audible alarm system", "assist control system", "communication system", "Ergonomics", "Format," and "Human Factors Project "," inconsistent with the principle of human factors engineering "," machine "," broadcasting system "and its definition (see 1992 edition of 3.2,3.3,3.7,3.9, 3.10,3.16,3.17,3.23,3.30);
- Added "Operating Experience" (see 5.8);
- Remove the "computer use" (see 1992 edition of 6.10.1);
- Added "naming" (see 7.6.2);
- Adjust the contents of Appendix A (see Appendix A, 1992 edition of Appendix A).

This standard uses redrafted law revision adopted IEC 60964:2009 "Nuclear power plant control room design." this standard and IEC 60964:2009 technical differences and their reasons are as follows.

- On normative references, this standard has been adjusted technical differences, in order

to adapt our technical conditions, the adjusted situation Focus is reflected in the status of Chapter 2, "Normative references", the specific adjustments are as follows.

- Modify with international standards of GB/T 12727 instead of IEC 60780 (see 7.10.2);
 - equivalents adoption of international standards GB/T 13624 instead of IEC 60960 (see 7.7.2.5);
 - use equivalent to international standards of GB/T 13625 instead of IEC 60980 (see 7.10.2);
 - Modify with international standards of GB/T 13631 instead of IEC 60965 (see 5.7);
 - Modify with international standards of GB/T 15474 instead of IEC 61226 (see 7.7.2.1);
 - with the modified use of international standards EJ/T 1118 instead of IEC 61771 (see 8.1);
 - with the modified use of international standards EJ/T 1143 instead of IEC 61839 (see 6.2.1);
 - Modify with international standards of NB/T 20026 instead of IEC 61513 (see 7.7.1);
 - equivalents adoption of international standards NB/T 20027 instead of IEC 62241 (see 7.7.2.4);
 - Modify with international standards of NB/T 20058 instead of IEC 61772 (see 7.7.2.3);
 - Modify with international standards of NB/T 20059 instead of IEC 61227 (see 7.7.3);
 - Modify with international standards of NB/T 20060 instead of IEC 60709 (see 5.3);
 - non-equivalent to international standards NB/T 20071 instead of IEC 61225 (see 7.10.1);
 - Remove the IEC 60964:2009 reference IAEANS-G-1.3 (see IEC 60964:2009 Chapter 3).
- Chapter 4 reserved only for control room design and the design team has requested.

The standard proposed by China National Nuclear Corporation.

This standard by the National Nuclear Instrument Standardization Technical Committee (SAC/TC30) centralized.

This standard was drafted. Nuclear Power Institute of China, Beijing CTEC System Engineering Co., Ltd., Institute of Nuclear Industry Standardization.

1 Scope

This standard specifies the design principles of nuclear factory owner control room, main control room function design method and functional design and staffing requirements, Also it provides the control room functional design verification and validation procedures.

This standard applies to nuclear control room design factory owner.

This standard does not apply to private or unattended control points, such as the main control room of the operating point of shutdown, radioactive waste treatment facilities, Emergency response facilities, etc., does not apply to the detailed design of the device.

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 12727 Nuclear power plant safety systems of electrical equipment qualification (GB/T 12727-2002, IEC 60780:1998, MOD) GB/T 13624 Nuclear Power Plant Functional design criteria for safety parameter display system (GB/T 13624-2008, IEC 60960. 1988, IDT) GB/T 13625 Nuclear power plant safety systems of electrical equipment seismic qualification (GB/T 13625-1992, eqv IEC 60980. 1988) GB/T 13631 Nuclear power plant auxiliary control point design guidelines (GB/T 13631-2015, IEC 60965:2009, MOD) GB/T 15474 Nuclear power plant instrumentation and control functions important to safety classification (GB/T 15474-2010, IEC 61226:2005, MOD) EJ/T 1118 nuclear power plant control room design verification and validation (EJ/T 1118-2000, IEC 61771:1995, MOD) EJ/T 1143 nuclear power plant control room design features analysis and distribution (EJ/T 1143-2002, IEC 61839:2000, MOD) NB/T 20026 Nuclear power plant instrumentation and control systems important to safety - general requirements (NB/T 20026-2014, IEC 61513:2011, MOD) NB/T 20027 nuclear factory owner control room alarm function display (NB/T 20027-2010, IEC 62241:2004, IDT) NB/T 20058 nuclear power plant control room display screen applications (NB/T 20058-2012, IEC 61772:2009, MOD) NB/T 20059 nuclear power plant control room operator controller (NB/T 20059-2012, IEC 61227:2008, MOD) NB/T 20060 Nuclear power plant instrumentation and control systems important to safety isolation criterion (NB/T 20060-2012, IEC 60709:2004, MOD) NB/T 20071 Nuclear power plant instrumentation and control systems important to safety of the power requirements (NB/T 20071-2012, IEC 61225.

2005, NEQ)

ISO 11064 (all parts) Control Center Human Factors Design
(Ergonomic design of control centres) IAEANS-G-1.9 nuclear power plant reactor coolant system and auxiliary system design (Design of the reactor coolant system and associated systems in nuclear power plants) IAEANS-G-1.11 against internal hazards other than fire and explosion (Protection against internal in nuclear power plant design hazards other than fires and explosions in the design of nuclear power plants)

3 Terms and Definitions

The following terms and definitions apply to this document.