

ICS 49.100
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**INDUSTRY STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

MH/T 6049-2020

Replacing MH/T 6049-2008

**Buried cable for airport navigation aid light loop
(English Translation)**

Issued on: July 20, 2020

Implemented on: October 1, 2020

Issued by: Civil Aviation 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 MH/T 6049-2008 "Buried Cables for Airport Navigation Aid Light Circuit". Compared with MH/T 6049-2008, the main technical the technical content changes are as follows.

- According to the National Metrology Technical Specification JJF 1001-2011 "General Metrology Terms and Definitions", the definition of nominal value has been revised (see 3.1);
- Modified the technical requirements of conductors (see 2008 version 6.1.1, 6.1.1);
- Modified the technical requirements for the integrity of the sheath (see 2008 version 6.4.4, 6.4.4);
- Modified the technical requirements for conductor DC resistance test (see 7.2.2 and 7.2.2 of the 2008 edition);
- Modified the partial discharge test requirements (see 7.2.4, 7.2.3 and 7.4.4 of the 2008 edition);
- Increase the electrical test of the sheath in the routine test (see 7.2.5);
- Added ST7 sheath high temperature pressure test in sampling test (see 7.3.1.1);
- Modified the technical requirements for bending test (see 2008 edition 7.4.3, 7.4.3);

- Modified the acceptance rules (see 2008 version 8.1.2, 8.1.2);
- Modified the technical requirements of the logo (see 2008 version 8.2.1, 8.2.1);
- Amended to be revised in accordance with the requirements of the national standard GB/T 8170 (see 2008 version 7.3.3.1), and GB/T 8170 is listed Include normative references;
- Add Appendix A.

This standard was proposed and interpreted by the Airport Department of the Civil Aviation Administration of China.

This standard is under the jurisdiction of the China Academy of Civil Aviation Science and Technology.

Drafting organizations of this standard. China Civil Aviation Science and Technology Research Institute, Shanghai National Cable Testing Center Co., Ltd.

1 Scope

This standard specifies the type, specification, naming, code, product representation, use characteristics, Technical requirements, testing, product acceptance rules, finished cable marking and cable packaging, transportation and storage.

This standard is applicable to the manufacture, acceptance and delivery of cables for the serial main circuit of airport navigation lights.

2 Normative references

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

GB/T 2951.11-2008 Cable and optical cable insulation and sheath materials general test methods Part 11: General test methods thickness and External dimension measurement mechanical performance test (IEC 60811-1-1:2001, IDT) GB/T 2951.12-2008 General test methods for insulation and sheath materials of electric and optical cables-Part 12: General test methods Heat aging Test method (IEC 60811-1-2:1985, IDT) GB/T 2951.13-2008 General test methods for insulating and sheathing materials of electric and optical cables-Part 13: General test methods Density measurement Shrinkage test (IEC 60811-1-3:2001, IDT) GB/T 2951.14-2008 General test methods for insulation and sheath materials of electric and optical cables-Part 14: General test methods Low temperature test Inspection (IEC 60811-1-4:1985, IDT) GB/T 2951.21-2008 General test methods for insulating and sheathing materials of electric and optical cables-Part 21: Special tests for elastomer mixtures Method ozone resistance test, thermal extension test, mineral oil

immersion test (IEC 60811-2-1:2001, IDT) GB/T 2951.31-2008 General test methods for insulating and sheathing materials of electric and optical cables-Part 31: Special test for PVC mixture Test method High temperature pressure test Anti-cracking test (IEC 60811-3-1:1985, IDT) GB/T 2951.32-2008 General test methods for insulating and sheathing materials of electric and optical cables Part 32: Special test for PVC mixture Test method weightlessness test thermal stability test (IEC 60811-3-2:1985, IDT) GB/T 2951.41-2008 General test methods for insulating and sheathing materials of electric and optical cables-Part 41: Polyethylene and polypropylene mixture Special test method Resistance to environmental stress cracking test Melt index measurement method Direct combustion method to measure carbon black and (or) minerals in polyethylene Filler content thermogravimetric analysis (TGA) to measure carbon black content, microscopic method to evaluate carbon black dispersion in polyethylene (IEC 60811-4-1:2004, IDT) GB/T 3048.5-2007 Electric wire and cable electrical performance test method Part 5: Insulation resistance test GB/T 3048.12-2007 Test methods for electrical properties of wires and cables Part 12: Partial discharge test GB/T 3956 Cable conductor GB/T 6995.3 Wire and Cable Identification Marking Method Part 3: Wire and Cable Identification Mark GB/T 8170 Numerical rounding rules and the expression and determination of limit values GB/T 18380.12 Fire test of electric and optical cables under flame conditions Part 12: Vertical flame spread of single insulated wire and cable Test-IkW premixed flame test method JB/T 8137 Wire and cable delivery tray IEC 60229:2007 Cable-Test of extruded outer sheath with special protective function

3 Terms and definitions

The following terms and definitions apply to this standard.

Nominal value

The rounded value or approximate value of the characteristic quantity of a measuring instrument or measuring system in order to provide guidance for proper use.

Example 1.The nominal value marked on the standard resistor. 100 kg;

Example 2.The amount marked on the single-scale measuring cup. 1 000 mL;

Example 3.The concentration of the substance in the constant temperature solution HClr. 0.1 mol/L;

Example 4.The temperature of the constant show box is -20 °C.

Note: "Nominal value" and "nominal value" should not be confused with "nominal characteristic value".

[Source. JJF 1001-2011, 7.4] 3.2 Median value when arranging several values obtained from the experiment in increasing (or decreasing) order, if the number of values is odd, the middle value it is the middle value; if the number of values is even, the average of the

middle two values is the middle value.

Routine tests

The test carried out by the manufacturer on all manufacturing lengths of the finished cable to check whether all cables meet the specified requirements.

Sample tests

Carried out by the manufacturer, carried out on the finished cable or some parts taken from the finished cable at a prescribed frequency to check whether the cable is Whether it meets the requirements of the test.

Type tests

A test carried out before supply according to general commercial principles to prove that the cable has good performance that can meet the expected use conditions.

Note: The characteristic of this test is that unless the cable material or design or manufacturing process changes may change the characteristics of the cable, it does not need to be repeated after the test is done.

4.1 Cable type and specification

The cable model and specifications are shown in Table 1.

4.2 Naming and Code

Buried cable D for the main circuit of airport navigation aid lights;

4.3 Product representation method

Products are represented by model, rated voltage, specification and number in this text.

Example. Rated voltage 5 kV copper core XLPE insulated polyethylene sheathed buried cable for the main circuit of airport navigation lights, single core nominal section 6 mm², indicating

5 Use characteristics

5.1

The rated voltage is 5 kV.

5.2

The maximum rated temperature of the cable conductor is 90 °C.