

ICS 17.200.20

CCS N11



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

GB/T 2614-2010

Replacing GB/T 2614-1998

Nickel-Chromium/Nickel-Silicon thermocouple wires

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Table of Contents

- 1 Scope
- 2 Normative references
- 3 Terms and Definitions
- 4 Products

Foreword

This standard replaces GB/T 2614-1998 "nickel-chromium - nickel silicon thermocouple wire." The main difference between this standard and GB/T 2614-1998 compared as follows:

--- Thermal EMF reference ASTM E230-2003 tolerance requirements, and the original standard thermal electromotive force tolerance is used IEC 584-2.1995 requirements.

--- For ease of use, it is listed in Appendix C of the standard nickel-chromium - nickel aluminum thermocouple wire unipolar platinum thermal electromotive force, in order to facilitate reference.

--- The standard according to GB/T 1.1-2000 and GB/T 20000.3-2003 standard requirements of the original were edited text on modify. The Standard Appendix A, Appendix B and Appendix C are informative appendices. The standard proposed by China Machinery Industry Federation. The standard instrument functional materials by the National Standardization Technical Committee (SAC/TC419) centralized. This standard is drafted by: Chongqing Instrument Materials Research Institute. Participated in the drafting of this standard. Jiangsu Huaxin Alloy Co., Ltd., Yueqing City, east China Factory Changzhou Lucheng Albert Alloy Factory, Texas group Force Alloys Ltd., Shaoxing Chunhui Automation Instrumentation Co., Ltd., Chongqing Sichuan Instrument Automation Co., Ltd. metal functional materials at public Secretary, Shenyang Alloy Co., Ltd., China Testing Technology Research Institute, Anhui Rand Group Co., Ltd. The main drafters of this standard. Chen Lixin, Ho Ying-lun, Yuan Qin Hua, Wu Xinghua, Wang Bowei, tension group, Zou Hua, Lee joint text, Zhang Xiaohua, Zhaopu Jun, Yin into the floor. This standard replaces the standards previously issued as follows:

--- GB/T 2614-1981, GB/T 2614-1985, GB/T 2614-1998. Nickel-chromium - nickel silicon thermocouple wire

1 Scope

GB/T 2614-2010 is the Chinese national standard on nickel-chromium/nickel-silicon

thermocouple wires, in the field of metrology and measurement. 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 1 December 2010 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 May 2011.

Classification: ICS 17.200.20, CCS N11. 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 nickel-chromium - nickel silicon thermocouple wire product classification, technical requirements, test methods, inspection rules, modes of supply, packaging and Mark. This standard applies to the manufacture of industrial nickel-chromium - nickel silicon thermocouple (K type thermocouple) alloy wire (hereinafter referred to as dual wire).

2 Normative references

The following documents contain provisions which, through reference in this standard and become the standard terms. For dated references, subsequent Amendments (not including errata content) or revisions do not apply to this standard, however, encourage the parties to the agreement are based on research Whether the latest versions of these documents. For undated reference documents, the latest versions apply to this standard.

GB/T 16701 precious metal, metal thermocouple wire thermal EMF measurement

GB/T 16839.1-1997 Thermocouples - Part 1. indexing table

JB/T 6819.2 meter material term temperature materials

3 Terms and Definitions

Terms and definitions JB/T 6819.2 established apply to this standard.

4 Products

4.1 Product name, code and nominal chemical composition Product name, code and the name of the chemical composition as shown in Table 1. Table

1 Categories and nominal chemical composition Product Name polarity code Nominal chemical composition (mass fraction) /% Ni Cr Si Al Nichrome wire cathode KP 90 10 - - Nickel-silicon alloy wire negative KN 97 - 3 - NOTE. The agreement between, can supply nickel-chromium - nickel-aluminum thermocouple wire, in addition to its unipolar emf of platinum, the other technical indicators and nickel-chromium - nickel silicon thermocouple

wire consistent.

4.2 grade thermocouple wire Thermocouple wire according to requirements and thermoelectric properties were divided into grade I, grade II and III grade.

4.3 dual wire recommended upper temperature limit Thermocouple wire of various diameters recommended upper temperature limit as shown in Table 2. Table

2 Recommended temperature thermocouple wire Even wire diameter/mm Long-term use temperature limit/°C Short-term temperature limit/°C 0.3 700 800 0.5 800 900 0.8,1.0 900 1000