

ICS 29.080.30

CCS K 15



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

GB/T 20139.2-2017

**Electrical insulation systems -- Thermal evaluation of
modifications to an established electrical insulation system
(EIS) -- Part 2: Form-wound EIS
(English Translation)**

Issued on: May 12, 2017

Implemented on: December 1, 2017

**Issued by: General Administration of Quality Supervision, Inspection and
Quarantine of the People's Republic of China**

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Foreword

GB/T .20139 "Electrical insulation system has been rated for electrical insulation system (EIS) component adjusted thermal evaluation" contains two section.

Part 1. scattered winding EIS;

Part 2. Forming Windings.

This part is part 2 of GB/T .20139.

This part is drafted in accordance with the rules given in GB/T 1.1-2009.

This part uses the translation method equivalent to the use of IEC 61858-2.:2014 "electrical insulation system has been determined the level of electrical insulation system (EIS) component adjustment - Part 2. Forming winding EIS ".

In this part of the normative reference to the international documents have a consistent correspondence between the following documents.

GB/T 7095.2-2008 enamelled copper flat wire assembly line 2. 120 grade acetal enamelled copper flat wire (IEC 60317-18.

2004, IDT)

GB/T 7095.4-2008 enamelled copper flat winding wire - Part 4. Class 180 polyesterimide enamelled copper flat wire (IEC 60317-28.

1990, IDT)

GB/T 7095.5-2008 enamelled copper flat winding wire part 5. grade 240 aromatic polyimide enamelled copper flat wire (IEC 60317-47.:1997, IDT) GB/T 7095.6-2008 enamelled copper flat winding wire - Part 6. Class.200 polyester or polyester imide/polyamide imide complex (EN 60317-29.:1990, IDT) GB/T 7672.3-2008 Glass wire package winding wire Part 3. 155 grade impregnated glass ribbon copper flat wire and glass fiber paint Copper Flat Wire (IEC 60317-32.:1990, IDT) GB/T 7672.4-2008 Glass wire package winding wire - Part 4. 180 grade varnish glass wire package copper flat wire and glass fiber paint Copper Flat Wire (IEC 60317-31.:1990, IDT) GB/T 7672.5-2008 Glass wire package winding wire - Part 5. Class.200 impregnated glass ribbon copper flat wire and glass Copper Flat Wire (IEC 60317-33.:1990, IDT) GB/T 7673.3-2008 Paper wrapping wire - Part 3. Paper - coated copper flat wire (IEC 60317-27.:1998, MOD) GB/T 11026.7-2014 Heat insulating properties of electrical insulating materials - Part 7. Determination of relative heat resistance of insulating materials (RTE) (IEC 60216-5.:2008, IDT) GB/T 11026.8-2014 Heat insulating properties of electrical insulating materials - Part 8. Determination of the resistance of insulating materials by means of fixed time limits Thermal index (TI and RTE) (IEC 60216-6.:2006, IDT) GB/T 17948.3-2006 Rotating electrical machinery Insulation structure Functional evaluation Forming winding test procedure 50MVA, 15kV and the following electrical insulation structural heat assessment and classification (IEC 60034-18-31.:1992, IDT) GB/T .20112-2015 Evaluation and identification of electrical insulation systems (IEC 60505.:2011, IDT)

--- GB/T 23310-2009 240 grade aromatic polyimide film wrapped copper flat wire (IEC 60317-44.:1997, IDT) this section makes the following editorial changes.

--- Note of Appendix B is deleted.

This part is made by China Electrical Equipment Industry Association.

This part of the National Electrical Insulation Materials and Insulation System Standardization Technical Committee (SAC/TC301) centralized.

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1 Scope

This part of GB/T 20139 specifies the required level of electrical insulation system (EIS) components to adjust the heat resistance assessment of the required test inspection procedures.

This section applies to EIS using electrical equipment for forming windings.

The test procedures in this section are determined by comparing the performance of the insulation system and the reference insulation system. The selected insulation system shall have the performance and operating experience in accordance with IEC 60505, or have complied with the requirements of IEC 60050-250 and IEC 60034-18-31:2012 the procedure is evaluated.

2 Normative reference documents

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

GB/T 11021-2014 Electrical insulation - Heat resistance and presentation method (IEC 60085:2007, IDT) GB/T 20139.1-2016 Electrical insulation systems Rated thermal insulation of the electrical insulation system (EIS) 1 part. scattered winding EIS (IEC 61858-1:2014, IDT) IEC 60034-18-31:2012 Rotating electrical machines - Part 18-31. Functional evaluation of insulation systems - Test procedure for forming windings - Rotation Rotary electrical system for thermal evaluation and classification (Rotating electrical machines-Part 18-31. Functional evaluation of insulation systems-Test procedures for form-wound windings-Thermal evaluation and classification of insulation systems used in rotating machines IEC 60216-5 Electrical insulating materials - Heat resistance - Part 5. Determination of relative heat resistance (RTE) of insulating materials [Electrical insulating materials-thermal endurance properties-Part 5. Determination of relative thermal endurance index (RTE) of an insulating material] IEC 60216-6 Electrical insulating materials - Heat resistance - Part 6. Determination of the heat resistance of insulating materials by means of fixed time limits (TI and RTE) [Electrical insulating materials-Thermal endurance properties-Part 6. Determination of thermal endurance indices (TI and RTI) of an insulating material using the fixed time frame method] IEC 60317 (all) Special winding wire specifications (Specifications for particular types of winding wires) IEC 60317-17 SPECIAL Winding Code Specification Part 17. Class 105, Polyvinyl Alcohol Enamelled Copper Flat Wire (Specifications for particular types of winding wires-Part 17. Polyvinyl acetate nameled rectangular copper wire, class

105)

IEC 60317-18 SPECIAL Winding Code Specification Part 18. 120 grade acetate enamelled

copper flat wire (Specifications for particular types of winding wires-Part 18.
Polyvinylacetate nameled rectangular copper wire, class 120) IEC 60317-27 SPECIAL WIRE
LINE SPECIFICATIONS PART 27. SPECIFIC WELDED BELT (Specifications
for particular types of winding wires-Part 27. Paper tape covered rectangular copper wire) IEC
60317-28 Specifications for particular winding wires - Part 28. Class 180 polyester imine
enamelled copper flat wire (Specifications for parti-