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

GB/T 22578.3-2020

**Electrical insulation systems(EIS)--Thermal evaluation of
combined liquid and solid components - Part 3: Hermetic
motor-compressors**

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Standardization Administration**

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Foreword

GB/T 22578 "Electrical Insulation System (EIS) Thermal Evaluation of Liquid and Solid Components" is currently divided into the following sections.

---Part 1.General requirements;

---Part 2.Simplified experiment;

---Part 3.Sealed motor-compressor.

This part is Part 3 of GB/T 22578.

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

The translation method used in this section is equivalent to adopting IEC /T S62332-3.2016 "Electrical Insulation System (EIS) Thermal Evaluation of Liquid and Solid Components

Part 3.Sealed motor-compressor".

The Chinese documents that have a consistent correspondence with the normatively cited international documents in this section are as follows.

---GB/T 1409-2006 Measuring the electrical permittivity and dielectric constant of electrical insulating materials at power frequency, audio frequency, and high frequency (including the wavelength of the meter wave)

Recommended method of mass loss factor (IEC 60250.1969, MOD)

---GB/T 4074.5-2008 Winding wire test method Part 5.Electrical performance (IEC 60851-5.2004, IDT)

---GB/T 5654-2007 Measurement of relative permittivity, dielectric loss factor and DC resistivity of liquid insulating materials

(IEC 60247.2004,IDT)

---GB/T 6109.1-2008 enamelled round winding wire Part 1.General provisions (IEC 60317-0-1.2005, IDT)

---GB/T 7113.2-2014 Insulation hose Part 2.Test method (IEC 60684-2.2003, MOD)

---GB/T 9341-2008 Determination of plastic bending properties (ISO 178.2001, IDT)

---GB/T 11026.1-2016 Electrical insulating materials heat resistance Part 1.Aging procedure and evaluation of test results

(IEC 60216-1.2013, IDT)

---GB/T 11026.3-2017 Electrical insulating materials heat resistance Part 3.Procedure for calculating heat resistance characteristic parameters

(IEC 60216-3.2006, MOD)

---GB/T 11026.7-2014 Electrical insulation materials heat resistance Part 7.Determine the relative heat resistance index of insulation materials

(RTE) (IEC 60216-5.2008, IDT)

---GB/T 13542.2-2009 Film for electrical insulation Part 2.Test method (IEC 60674-2.1998, MOD)

---GB/T 20112-2015 Evaluation and identification of electrical insulation systems (IEC 60505.2011, IDT)

The following editorial changes have been made in this section.

---3.1 "Unit is mg/g (calculated as KOH)" is placed in the note;

--- Modified B.2.

This part is proposed by China Electrical Equipment Industry Association.

This part is under the jurisdiction of the National Standardization Technical Committee for Evaluation of Electrical Insulation Materials and Insulation Systems (SAC/TC301).

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Suzhou Taihu Electric New Material Co., Ltd. and Yantai Minshida Special Paper Co., Ltd.

Introduction

This part of GB/T 22578 specifies the thermal evaluation method for electrical insulation

systems (EIS) of electrical products containing liquid and solid components.

GB/T 22578.1 stipulates the general method of thermal evaluation test for liquid and solid components. GB/T 22578.2 specifies simplified test methods,

It can be used for the screening test before the GB/T 22578.1 test, and can also be used for quality control and evaluation when the secondary product is changed. GB/T 22578

The test methods specified in this part of the test are applicable to compressor electrical equipment, such as refrigerators, air conditioners and other products, and are suitable for evaluating motor-compression

The machine's electrical insulation material (EIM) and electrical insulation system (EIS). The test methods specified in this section are for evaluating the high temperature of refrigeration equipment

The ability to maintain equipment performance under high pressure conditions after immersion in refrigeration oil and refrigerant is very important.

This section and GB 4706.17 jointly apply to compressor products.

This section applies to the evaluation of EIM and EIS of hermetic motor-compressors used in refrigerators and air conditioners. Main test course

The sequence includes the evaluation of the durability of EIM and EIS in refrigerants and oils at high temperature and high pressure, and outlines how to evaluate the mechanical properties and heat resistance of EIM

The performance and chemical properties are evaluated, and these properties are closely related to keeping the equipment in good working condition.

This section specifies an autoclave test method. The autoclave should contain all the main EIM components, the component ratio and the actual electrical production

The product is the same.

Electrical Insulation System (EIS)

Thermal evaluation of liquid and solid components

Part 3. Sealed motor-compressor

1 Scope

This part of GB/T 22578 is applicable to liquids and solids containing refrigerants and oils, with thermal stress as the main aging factor, unlimited voltage level

Thermal evaluation of electrical insulation materials (EIM) and electrical insulation systems (EIS) of body components.

2 Normative references

The following documents are essential for the application of this document. For dated reference documents, only the dated version applies to this article

Pieces. For the cited documents without date, the latest version (including all amendments) applies to this document.

GB/T 11026.4-2012 Heat resistance of electrical insulating materials Part 4.Aging oven single-chamber oven (IEC 60216-4-1.

2006, IDT)

GB/T 20111.1-2015 Electrical Insulation System Thermal Evaluation Regulations Part 1.General Requirements Low Voltage (IEC 61857-1.

2008, IDT)

GB/T 20111.2-2016 Electrical Insulation System Thermal Evaluation Regulations Part 2.Particular requirements for general models

Application (IEC 61857-21.2009, IDT)

IEC 60216-1 Heat resistance of electrical insulating materials. Part 1.Aging procedure and evaluation of test results (Electrical

insulating materials Thermal endurance properties-Part

1.Ageing procedures and evaluation of test

results)

IEC 60216-3 Heat resistance of electrical insulating materials. Part 3.Procedure for calculating heat-resistant characteristic parameters (Electrical insulating

materials-Thermal endurance properties-Part 3.Instructions for calculating thermal endurance characteristics)

IEC 60216-5 Heat resistance of electrical insulating materials. Part 5.Determination of the relative heat resistance index (RTE) of insulating materials

[Electrical insulating materials-Thermal endurance properties-Part 5.Determination of relative thermal endurance index (RTE) of an insulating material]

IEC 60247 Insulating liquids measure relative dielectric constant, dielectric loss factor (tan delta) and DC resistivity [Insulating liq-

uids-Measurement of relative permittivity, dielectric dissipation factor (tan delta) and d.c. resistivity]

IEC 60250 measures the electrical permittivity and dielectric loss factor of electrical