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

GB/T 29305-2012

**Measurement of the average viscometric degree of
polymerization of new and aged cellulosic electrically
insulating materials**

新的和老化后的纤维素电气绝缘材料粘均聚合度的测量

(English Translation)

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Table of Contents

Preface
Introduction
1 Scope
2 Normative references
3 Terms and definitions, symbols
4 Principle
5 Equipment and Reagent
Sample 4
7 Test Step
8 Test Report
Appendix A (normative) copper ethylene diamine solution
Preparation (normative) copper ethylene diamine Appendix B
Annex C (normative) copper ethylene diamine solution

Foreword

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

This standard uses the translation method identical with IEC 60450:2004 A1.2007 "New and cellulosic electrically insulating material sticky after aging Average degree of polymerization of the measure. " Consistency correspondence with this standard Normative documents of the following documents.

--- GB/T 462-2008 paper, board and pulp - Determination of water samples (ISO 287. 1985, MOD) the standard proposed by China Electrical Equipment Industrial Association.

This standard by the National Electrical insulation materials and insulation systems assessment Standardization Technical Committee (SAC/TC301) centralized.

Participated in the drafting of this standard. Suzhou Jufeng Electrical Insulation Systems Co., Ltd., Beijing Electrical Machinery Industry Technology Research Institute of Economy, Shenzhen City, measuring Detection Technology Co., Ltd., Shanghai Electric Equipment detection.

Introduction

Experience has shown the need to improve test methods and new cellulosic electrically insulating material sticky after aging average degree of polymerization may be repeated speculation.

This standard applies to oxidative degradation in the processing stage and outflow generated. Another important factor is the need to ensure that the materials used to dissolve and it is used, which is accelerated outflow.

New and aged cellulosic electrically insulating materials Measuring the viscosity average degree of polymerization

1 Scope

This standard specifies a new electrical insulating materials and cellulose sticky after aging average degree of polymerization to standard methods (DP_{nu}) measurements.

This standard applies to all cellulose insulation, cellulose insulation such as transformers, cables, capacitors and other products used.

Test methods described in this standard also applies to after chemical modification can be completely dissolved in the solvent selection kraft intrinsic viscosity measurement.

The test method described in this standard when glazed kraft paper for caution.

Note: For a sample material, the degree of polymerization of the cellulose molecule is not the same, so the average degree of polymerization as measured by the viscosity may be related by other methods (such as Osmosis or ultra-centrifugation) different values \u200b\u200bmeasured.

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.

The water content of the oil insulating liquid IEC 60814 Paper and board Determination by Karl Fischer titration with automatic power
(Insulatingliquids-Oil-impregnatedpaperandpressboard-Determinationofwaterbyautomatic coulometricKarlFischertitration) ISO 287 paper, board and pulp - Determination of water samples for analysis (Paperandboard-Determinationofmoisture content-Oven-dryingmethod) ISO 3105 glass capillary kinematic viscosity specifications and operating instructions
(Glasscapillarykinematicviscometers-Spec-ificationsandoperatinginstructions)

3 Terms and definitions, symbols

The following terms and definitions, symbols apply to this document.

3.1 Terms and Definitions

3.1.1

Degree of polymerization of the cellulose molecule

degree of polymerization of a cellulose molecule Cellulose molecules of anhydrous glucose monomers number -beta- ($C_6H_{10}O_5$) is.

Note: Figure 1 shows the chemical formula of the cellulose molecule.

1 cellulose molecule chemical structural formula diagram