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

GB/T 7690.3-2013

Replacing GB/T 7690.3-2001

**Reinforcements -- Test method for yarns -- Part 3: Determination
of breaking force and breaking elongation for glass fibre**

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Foreword

GB/T 7690 "Test method for yarns enhanced" is divided into six sections.

--- Part 1. Determination of linear density;

--- Part 2. Determination of twist;

--- Part 3. Glass fiber breaking force and elongation measurement;

--- Part 4. Determination of stiffness;

--- Part 5. Determination of glass fiber diameter of the fiber;

--- Part 6. Determination of twist balance index.

This section GB/T 37690 Part of.

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

This Part replaces GB/T 7690.3-2001 "enhanced method for yarns Part 3. Glass fiber breaking force and elongation

Measured "rate, and GB/T 7690.3-2001 main differences are as follows.

--- Remove the "Normative references" in GB/T 18374, an increase of GB/T 2918-1998 (Chapter 2, see the 2001 edition

Chapter 2);

--- Added three definitions (see 3.1,3.2,3.5).

This section uses redrafted law revision using ISO 3341.2000 test "Textile glass yarn breaking strength and elongation

set".

This part of ISO 3341.2000 technical differences and their reasons are as follows.

--- To increase the precision of the data, modify the retention digit breaking strength, tensile strength and elongation values of the results (see 9.1,

9.2 and 9.3);

--- Chapter 10, "precision" as an information appears in Appendix A, harmonization (see Appendix A and GB/T 9914.3-2013, ISO 3341.2000, chapter 10).

This part made the following editorial changes.

--- Consistent with the existing standard series, the standard name will be changed to "Enhanced Test method for yarns Part 3. Glass fiber break

Crack strength and elongation of the determination. "

This part of the National Standardization Technical Committee fiberglass (SAC/TC245) centralized.

This section is responsible for drafting. Nanjing Fiberglass Research and Design Institute Limited, the national glass fiber product quality supervision and inspection center.

1 Scope

This section 1.1 GB/T 7690 specifies the method for determination of breaking glass fiber yarn in package form of strength and elongation at break.

1.2 method is applicable to all types of glass fiber yarn (yarn, plied yarn, cable yarn, raw silk, absolutely roving, roving, etc.). Correct

In yarn, plied yarn and yarn cables, adapted to substantially taken from the package diameter of less than 2mm or less than 2000tex linear density of yarn, if

We can provide test conditions for all stakeholders to accept and to be used for a diameter greater than 2mm or greater than the linear density of the yarn 2000tex

Determination.

1.3 methods do not apply to the humidity and environmental standards applied elongation 5mN/tex pretension condition than 0.5% glass fiber

yarn. This yarn can be at all stakeholders agreed terms, a lower pre-tension (eg 2.5mN/tex or 1mN/tex) were measured

test. This occurred mainly in the staple fiber yarn.

Note 1. This method can also be used to determine the warp beam yarn or fabric from the yarn, but the test results only as a status indicator.

Note 2. This method is mainly used to determine the material properties and quality control. Friction between the fibers and the fibers as well as factors such as tension unevenness (drape) and other increases

Test results discrete, leading to lower test values. This will inevitably affect the accuracy and relevance of the final yarn properties between the effects applied. If the

The method used for specification purposes, should pay special attention.

Note 3. Although this section provides a possibility to determine the elongation at break, but does not recommend this method. Indeed, the elongation at break right measurement method can only be used extensometer

Determining displacement gauge rather than move the gripper beam. On the other hand, experiments show that, although the use of very accurate extensometer measure but easy to damage the sample.

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.

GB/T 2918-1998 standard plastic sample conditioning and environment testing (ISO 291.1997, IDT)

GB/T 7690.1-2013 Reinforcements Test method for yarns - Part 1. Determination of linear density (ISO 1889.2009, IDT)

3 Terms and Definitions

The following terms and definitions apply to this document.

3.1

Breaking strength breakingforce

Tensile test, the specimen fracture when subjected to the maximum force (or load), in Newtons (N).

3.2

Breaking strength breakingstrength

Sample units are exposed linear density tensile breaking strength in Newtons per tex (N/tex).

3.3

Elongation at break elongation

When the specimen breaks, the length of the increment in the effective length of the usable length units, such as "mm", can also be a percentage of the effective length of the table

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