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YC

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

YC/T 169.5-2009

Replacing YC/T 169.5-2002

**Determination of physical and chemical characteristics of tow
for cigarette. Part 5: Breaking strength
(English Translation)**

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Foreword

YC/T 169 "cigarette tow physical and chemical properties of determination" is divided into 12 sections;

- Part 1. tow linear density;
- Part 2. Single yarn density;
- Part 3. number of crimps;
- Part 4. tow crimp index and the crimp tow elastic recovery;
- Part 5. breaking strength;
- Part 6. cross-sectional shape and radial shaped degree;
- Part 7. Regain;
- Part 8. moisture content;
- Part 9. oil content;
- Part 10. residual acetone content;
- Part 11. Titanium dioxide content;
- Part 12. Packaging and appearance.

This section YC/T 169 Part 5.

This Part replaces YC/T 169.5-2002 "tow for cigarette was measured series of standards - Part 5. breaking strength." this section compared with YC/T 169.5-2002 main changes are as follows.

--- By the name of this section. Change "series of standards for cigarette tow measured breaking strength Part 5" to "physical and chemical properties of cigarette tow

Determination Part 5. breaking strength ";

--- "Normative references" to remove the GB/T 6529 "textiles conditioning and testing using standard atmosphere", YC/T 26-2002 "Tobacco use secondary cellulose acetate tow," adds GB/T 16447 "regulate tobacco and tobacco products and testing atmosphere";

--- Modify the sample;

--- Modified atmospheric conditions adjustment and testing requirements;

--- 6.2 adds specific requirements for adjustment of the instrument;

--- Measurement report adds two things. "the provisions of this part of the step of determining the difference" and "observed abnormal test phenomenon";

--- Increased in Appendices A and B.

Appendix A of this section and Appendix B is an informative annex.

This part by the State Tobacco Monopoly Bureau.

This part of the National Standardization Technical Committee of tobacco smokable material Technical Committee (SAC/TC144/SC8) centralized.

This section drafted by. China National Tobacco Quality Supervision and Inspection Center, Zhuhai Cellulose Fiber Co., Ltd., Nantong Cellulose Fibers Co., Ltd., Kunming Ming Acetate Fiber Co., Ltd., Xi'an Huida Chemical Industries Limited.

1 Scope

YC/T in this part 169 specifies the method for the determination of smoke tow rupture strength.

This section applies to tobacco cellulose diacetate tow.

2 Normative references

The following documents contain provisions which, through reference YC/T 169 of this text, constitute provisions of this section. For dated reference documents Member, all subsequent amendments (not including errata content) or revisions do not apply to this section, however, encouraged to reach under this section Parties to research agreement to use the latest versions of these documents. For undated reference documents, the latest versions apply to this section.

GB/T 16447 Tobacco and tobacco products for conditioning and testing atmospheres (GB/T 16447-2004, ISO 3402:1999, IDT) Principle 3 at a constant speed tensile specimen to fracture tow exposed to the maximum tow line tension and density ratio.

4 Instruments and equipment

4.1

tensile testing machine shall meet at a predetermined rate in the sample is drawn, and breaking strength and elongation of the sample can be measured. Rally test Testing machine should include.

a) measuring and recording devices. the breaking strength at break accuracy up to $\pm 1\%$ of reading accuracy and elongation of up to $\pm 0.5\text{mm}$.

Tensile testing machine range is 500N, the effective measurement range shall be between 10% to 90% of the total process.

Adjustment means b) Tensile speed. means for adjusting the drawing speed, should satisfy $300\text{mm/min} \pm 10\text{mm/min}$.

c) two samples folders. should be able to grip the entire width of the specimen. Neither should the test process, to produce a sample slide is not subject to damage.

The centerline of the specimen holder should be coaxial with the center line of the sample, the clamping force its direction length of the specimen holding of $\pm 1^\circ$ vertical. Two clamping surface of the specimen holder or cramping should be kept in the same plane, cramping during the test should be kept of $\pm 1^\circ$ parallel.

d) distance between the two sample holder is adjustable, should be adjusted to the desired length of the test, but the error should not exceed $\pm 1\text{mm}$. Tow Test the initial length of $(200 \pm 1)\text{mm}$.

NOTE: To determine the breaking strength of tow for cigarette may also be double-pull method, see Appendix A, double Rafah equipment can also be used to determine the cigarette tow able to curl, the Senate See Appendix B.

4.2

Other tools. scissors.

5 Sampling

From laboratory samples randomly intercept length 300mm curl undamaged tow five sections.

6 Measuring step

6.1

Before the test, according to GB/T 16447 samples were adjusted to regulate the more than 12h, and tested under the appropriate environmental conditions.

6.2

adjust the instrument by instrument operating procedures, the instrument is in test status.

Adjust the instrument sample holder spacing of $200\text{mm} \pm 1\text{mm}$, stretching