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

GB/T 22881-2008

**Paper and board -- Determination of roughness/smoothness
(air leak methods) -- General method**

纸和纸板 粗糙度（平滑度）的测定（空气泄漏法）通用方法
(English Translation)

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Foreword

This revised standard adopts ISO 8791-1. 1986 Determination of "paper and paperboard roughness/smoothness (air leak methods) - Part 1. pass Method. " this standard and ISO 8791-1. 1986 as compared to the main differences are as follows.

--- International Standard ISO document standard will be referenced in the normative references converted to its corresponding national standard, GB/T 450 paper and cardboard to take samples and specimens to the vertical and horizontal, positive and negative determination (GB/T 450-2008, ISO 186:2002, MOD);

--- Normative references to international standards in the document will be converted to ISO standards referenced with the corresponding national standards, that GB/T 10739 paper, paperboard and pulp sample processing and testing standard atmospheric conditions (GB/T 10739-2002, eqv ISO 187:1990).

The standard proposed by China National Light Industry Council.

This standard by the National Standardization Technical Committee of the paper industry.

This standard is mainly drafted by. Sichuan Changjiang Paper Instrument Co., Ltd., China Pulp and Paper Research Institute, the national paper quality supervision Inspection Center.

1 Scope

This standard specifies the determination of paper and paperboard roughness (smoothness) of the basic requirements and procedures for air leakage method.

This standard applies to most paper and board, but not for embossed paper, crepe paper or under the test conditions can not pave the paper, and can Passing through the high air permeability of the sheet of paper a lot of airflow.

NOTE: Gurley is measured by surface leakage between adjacent air sample, it is not included in this

standard.

2 Normative references

The following documents contain provisions which, through reference in this standard and become the standard terms. For dated references, subsequent Amendments (not including errata content) or revisions do not apply to this standard, however, encourage the parties to the agreement are based on research Whether the latest versions of these documents. For undated reference documents, the latest versions apply to this standard.

GB/T 450 and take samples to an aspect of paper and paperboard samples, positive and negative determination (GB/T 450-2008, ISO 186.

2002, MOD)

GB/T 10739 paper, paperboard and pulp sample processing and testing standard atmospheric conditions (GB/T 10739-2002, eqv ISO 187.

1990)

3 Terms and Definitions

The following terms and definitions apply to this standard.

Under test conditions, the air leakage rate from the time between the plane and the sample through the function specified.

If the value increases show an increased roughness, the performance called roughness. Bent students, both Parker and Sheffield roughness test example of.

If the value increases show an increased degree of smoothing, the performance called smoothness. Buick test is an example of smoothness.

Shows the test results of the unit depends on the equipment, but most of the roughness of the test unit was milliliters per minute, the smoothness test Seconds. Parker printing surface analyzer exception roughness expressed in microns.

Principle 4

The sample is placed between a smooth plate and a smooth circular probe. The measuring head side pressure is generally atmospheric pressure, the other side of the pressure can be adjusted to achieve a predetermined pressure differential. Under the specified test conditions, the air velocity through the probe and the sample surface between to measure the roughness of the sample (smoothness).

5 Instruments

The instrument shall comply with the provisions of the corresponding test methods detailed standards and should meet the following basic conditions.

- a) determination of the accuracy of the air leakage rate should reach $\pm 5\%$ of the measured value; or
- b) determining the accuracy of the volume should reach the measured value $\pm 2\%$, and (or) the accuracy of measuring time should reach $\pm 1\%$ of the measured value.