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

QB/T 4116-2023

Replacing QB/T 4116-2010

Case and bag - Test method for rotary drum

箱包 滚筒试验方法

(English Translation)

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Foreword

This document was drafted in accordance with the rules given in GB/T 1.1-2020 Directives for standardization - Part 1: Rules for the structure and drafting of standardizing documents.

This document replaces QB/T 4116-2010 Case and bag - Test method for rotary drum. Compared with QB/T 4116-2010, apart from structural and editorial changes, the main technical changes are as follows:

- a) the requirements for the case and bag drum tester have been changed (see 5.1; 3.1 of the 2010 edition);
- b) the determination of the volume of travel bags has been added (see 7.1);
- c) the specified load for travel cases (bags) has been changed (see 7.1; 5.2 of the 2010 edition);
- d) the way the size of travel cases is expressed has been changed (see 7.1; 5.2 of the 2010 edition);
- e) requirements for filling the load have been added (see 7.2);
- f) the note on the conditioning temperature has been made part of the normative text (see 7.3; 5.3 of the 2010 edition);
- g) the way the case or bag is placed in the drum has been added (see 7.4);
- h) the schematic diagrams of the drum tester structure and of the unfolded drum interior have been changed and explanations added (see Figures A.1 and A.2; Figures A.1 and A.2

of the 2010 edition);

i) structural diagrams of the baffle and guide plates have been added (see Figures A.3, A.4 and A.5);

j) the structural diagram of the cone has been deleted (see Figure A.3 of the 2010 edition);

k) the material and dimension requirements for the cone components have been deleted (see Table A.1 of the 2010 edition);

l) the content of the test report has been changed (see Clause 8; Clause 6 of the 2010 edition).

This document was proposed by China National Light Industry Council.

This document is under the jurisdiction of the National Technical Committee on Leather Industry of Standardization Administration of China (SAC/TC 252).

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The previous editions of this document and of the document it replaces are: first issued in 2010 as QB/T 4116-2010; this is the first revision.

1 Scope

This document describes the rotary drum test method for cases and bags.

This document is applicable to testing the drum impact performance of all types of travel cases and bags.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

QB/T 5083-2017 Case and bag - Determination of volume ratio

3 Terms and definitions

No terms and definitions are listed in this document.

4 Principle

The sample is placed in the drum cavity of the drum tester. As the drum rotates, the sample tumbles freely and strikes the drum walls and the obstacles, which subjects it to impact and vibration. After a set number of revolutions at a set rotational speed, the overall quality of the sample is inspected.

5.1 Case and bag drum tester

The tester shall include the following components:

- a) metal drum: the cavity is a regular hexagonal prism, and guide plates, baffles and other obstacles are fitted on four of its inner faces, so that the sample receives impacts of different severity as it tumbles; the structure, dimensions and materials shall comply with Annex A;
- b) guard rail: keeps the sample in the test position while it tumbles;
- c) control device: allows the rotation mode, rotational speed and number of revolutions to be set and the zero point to be adjusted;
- d) recording device: with automatic recording and memory functions.

5.2 Steel tape measure

Accuracy 1 mm.