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

GB/T 42224-2022

**Footwear - Attachment strength of straps, trims and
accessories**

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foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for Standardization Work Part 1. Structure and Drafting Rules for Standardization Documents" drafting.

This document is modified to adopt ISO 24263.2020 "Combining Forces of Footwear Strips, Decorative Parts and Accessories".

Compared with ISO 24263.2020, this document has made the following structural adjustments.

--- Added 4.1.1, 4.1.2, 4.5, 5.4, 7.2.3;

--- Figure 1 corresponds to Figure 3 in ISO 24263.2020;

--- Figure A.1 and Figure A.3 respectively correspond to Figure 1 and Figure 2 in ISO 24263.2020.

The technical differences between this document and ISO 24263.2020 and their reasons are as follows.

--- Changed the scope of application (see Chapter 1) to clarify the scope of application to facilitate the application of this document;

--- Changed the terms and definitions of decorative parts (see 3.1, 3.1 of ISO 24263.2020) to eliminate ambiguity and facilitate the reference of this document

application;

--- Replaced ISO 7500-1 (see 4.1.1) with the normatively quoted GB/T 16825.1, to adapt to the technical conditions of our country, increase the available

operability;

--- Changed the clamping requirements of the upper and lower clamps (see 4.1.2, 4.1 of ISO 24263.2020) to improve operability;

--- Changed the specification requirements of vernier calipers (see 4.2, 4.2 of ISO 24263.2020) to improve operability;

--- Increase the feeler gauge and its specification requirements (see 4.5) to improve operability;

--- Changed the sampling requirements (see 5.1, 5.2, 5.3, 5.1, 5.2, 5.3 of ISO 24263.2020) to make the expression more rigorous to improve

Operability;

--- Replaced ISO 18454 (see 5.4) with the normatively quoted GB/T 22049 to adapt to my country's technical conditions and increase operability

active;

--- Changed the environmental conditioning time (see 5.4, 5.3 of ISO 24263.2020), industry practice, consistent with other standards;

--- Added the sample damage type "upper surface damage" (see 7.2.2) in the binding force test of decorative parts to improve operability;

--- Increased the type of damage to the sample in the eyelet binding force test (see 7.3.5) to improve operability;

--- Increased the rounding off requirements of test results (see Chapter 8) to improve operability and eliminate ambiguity.

The following editorial changes have been made to this document.

--- "Hook and shoe eye binding force" is changed to "shoe eye binding force" (see 5.3, 6.3, 7.3, 8.3);

--- Added the expression "repeat the above steps for the remaining decorative parts to be tested" in the binding force test of decorative parts (see 7.2.3);

--- Increased the description of the index number in Figure 1 (see Figure 1);

--- Changed the order of a) and b) in the test report (see Chapter 9);

--- Added Appendix A (informative) "clamp example".

Please note that some contents of this document may refer to patents. The issuing agency of this document assumes no responsibility for identifying patents.

1 Scope

This document describes the test methods for the binding force between upper strip and sole, upper and trim, upper and accessories (eyelets) of footwear.

This document is applicable to the test of the binding force between the upper strip and the sole, the upper and the decorative parts, and the upper and the accessories (eyelets) of footwear.

2 Normative references

The contents of the following documents constitute the essential provisions of this document through normative references in the text. Among them, dated references

For documents, only the version corresponding to the date is applicable to this document; for undated reference documents, the latest version (including all amendments) is applicable to

this document.

GB/T 16825.1 Inspection and calibration of static uniaxial testing machines for metallic materials - Part 1. Tensile and (or) compressive testing machines

Inspection and calibration of force measuring system (GB/T 16825.1-2022, ISO 7500-1:2018, IDT)

GB/T 22049 Footwear Standard environment for environmental conditioning and testing of footwear and footwear components (GB/T 22049-2019, ISO 18454.

2018, IDT)

3 Terms and Definitions

The following terms and definitions apply to this document.

3.1

trim trim

The parts attached to the help surface are decorative.

Example. buttons, upper decorations.

4.1 Tensile testing machine.

4.1.1 Tensile testing machine, suitable for the tensile range of the sample to be tested, with

an accuracy of 2%, and should meet the requirements of level 2 in GB/T 16825.1. In many cases, the appropriate force value range is 0N~1000N.

4.1.2 Clamp, moving speed is (100 ± 10) mm/min. The central axis of the upper and lower clamps is consistent with the direction of the applied tension. The lower clamp can hold the specimen and prevent it from sliding, the edge of the lower jaw will not cut or damage the specimen. See Appendix A for clamp examples.

4.2 Vernier caliper, the accuracy should not be less than 0.5mm.

4.3 The binding force of shoelaces should be greater than the binding force of eyelets to be tested.

5.1 Strip binding force

For strips of the same width, at least 2 samples shall be tested, and samples shall be taken from the left and right shoes of a pair of shoes, only the width of the test shall not be greater than