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

GB/T 14625.3-2008

Replacing GB/T 14625.3-1993

**Test methods for basketball, football, volleyball and handball -
Part 3: The determination of resistance to shock**

篮球、足球、排球、手球试验方法 第3部分：动态耐冲击试验方法

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Foreword

GB/T 14625 "Basketball, Football, Volleyball, Handball Test Method" is divided into five parts.

---Part 1. Determination of roundness;

--- Part 2. Determination of the rebound height;

---Part 3. Dynamic impact test method;

--- Part 4. Test conditions and sample preparation;

--- Part 5. Measurement of circumference length and circumference difference. This part is the third part of GB/T 14625. This section refers to the FIBA "Basketball Competition Rules", FIFA "Football Competition Rules", and the International Volleyball "Volleyball Competition Rules" Formulated. This part replaces GB/T 14625.3-1993 "Basketball, Football, Volleyball, Handball Dynamic Impact Test Method". The main changes in this section compared with GB/T 14625.3-1993 are as follows:

- a) add "normative references";
- b) increase and refine the "rebound board" requirement in the "device";
- c) Replace Chapter 4 "Test Conditions" and Chapter 5 "Samples" in Chapter 5, "Test Conditions and Preparation of Samples";
- d) delete the "tightening the anchor screw" in Chapter 7 of the original standard;
- e) adding "appearance" requirements in Chapter 8, "Representation of Results";

8.2 of the original standard. This part was proposed by the China Light Industry Federation. This part is under the jurisdiction of the National Leather Industry Standardization Technical Committee (SAC/TC252). This section drafted by: High-speed rail testing equipment (Dongguan) Co., Ltd., National Sports General Administration Equipment and Equipment Center, China Leather and Shoemaker Industry Research Institute, Guangzhou Hailesi Ball Manufacturing Co., Ltd., Yuxi (Kunshan) Sporting Goods Co., Ltd. The main drafters of this section. Chen Jingchang, South Korea Chun, Zhong Yaoqiang. This section was first released in September.1993 and this is the first revision. GB/T 14625.3-2008 Basketball, football, volleyball, handball test methods Part 3. Dynamic impact test method

1 Scope

GB/T 14625.3-2008 is the Chinese national standard on test methods for basketball, football, volleyball and handball - part 3: the determination of resistance to shock, in the field of domestic and commercial equipment, entertainment, sport. The /T suffix marks it as a recommended standard: it is not compulsory by itself, but it becomes binding as soon as a contract, a tender or a customer specification calls it up - which in practice is how most foreign buyers meet it. It was issued on 30 December 2008 by the General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China; Standardization Administration of China, and has been in force since 1 September 2009. Classification: ICS 97.220.01, CCS Y56. This page is published from the official record of the standard held by the Chinese standards administration: the identification, the dates, the classification and the issuing body are taken from there. The clause text, the tables and the numeric limits are in the document itself, which is delivered complete in English translation.

This part of GB/T 14625 specifies the test methods for the dynamic impact resistance of basketball, football, volleyball and handball. This section applies to basketball, football, volleyball, and handball for competitions and daily activities.

2 Normative references

The provisions in the following documents become the provisions of this part by reference in this part of

GB/T 14625. Quotations with dated And all subsequent amendments (not including errata content) or revisions do not apply to this section, however, encouragement is achieved in accordance with this section. The parties to the agreement study whether the latest versions of these documents can be used. For undated references, the latest edition applies to this section.

GB/T 14625.4 Basketball, football, volleyball, handball test methods - Part 4. Test conditions and sample preparation

GB/T 14625.5 Basketball, football, volleyball, handball test methods - Part 5

3 Drum track 180 170 160 160 145 130 155 145 135 140 130

6.3 Start the pressure impact test machine, idling for 2min, put the sample, predict 3 times ~ 5 times, adjust the position of the rebound plate, make the sample basically rush Hit the middle of the rebound and bounce into the catching bag.

6.4 Adjust the preselection switch of the counter to the number of times required for measurement.

6.5 Start the test machine, put in the sample, and start the test.

6.6 Arrive the specified number of times, lower the block before the projectile drum, take out the sample, and let stand for 30 minutes.

6.7 Check the sample for cracks, implosion, degumming, wire breakage, deformation, etc.

6.8 Measure the circumference and circumference of the specimen according to GB/T 14625.5.

6.9 Measure the pressure inside the sample.

4 Device

4.1 Pressure impact tester, its main components should meet the following requirements.

---Planing drum, diameter 600mm, thickness 250mm, drum arc radius $336.55\text{mm} \pm 1.50\text{mm}$, drum speed $340\text{r/min} \pm 10\text{r/min}$, the distance between the drum and the rebound plate is $1950\text{mm} \pm 50\text{mm}$;

---Rebound plate, phenolic resin board, hardness is Ub hardness HS80 ~ HS90, thickness is 25mm, or made of cloth-based plywood (Hardness HRC70HRC80), the angle between the rebound plate and the horizontal plane is $60^\circ \pm 2^\circ$, and the distance between the drum and the drum can be adjusted;

--- Photoelectric counting controller that automatically records the number of tests.

4.2 Barometer, accuracy 1.5, range 0MPa ~ 0.16MPa, minimum scale 0.0025MPa.

4.3 Metal tape or fiber tape with a minimum scale of 1mm.

5 Test conditions and sample preparation

Should comply with the provisions of GB/T 14625.4.

6 Test methods

6.1 Measure the circumference and circumference of the specimen according to GB/T 14625.5.

6.2 Adjust the distance between the upper and lower projecting drums according to the type of the sample and the ball number (the distance between the projecting drums is the distance between the axes of the upper and lower projecting drums) Leave) to comply with Table 1. GB/T 14625.3-2008 Table

1 The distance between the projecting drums is in millimeters. Name basketball football volleyball handball Ball number 7 6 5 5 4 3 5 4 3 4

7 Handling precautions

7.1 Stop before stopping the distance between the projectile drums.

7.2 The test cannot be carried out due to the quality problem of the sample, record the number of tests, end the test, and determine that the test is not qualified.

7.3 The test is interrupted due to power outage, equipment failure and other reasons. The test is terminated and the test is judged to be invalid. The test is resampled.

8 Representation of the result

8.1 Appearance It is indicated by whether the sample is cracked, imploded, degummed, broken, deformed, etc.

8.2 deformability Expressed by the difference between the test and the pre-test circumferential difference, calculated according to formula (1). $\Delta L_m = \Delta L_2 - \Delta L_1$
(1) In the middle ΔL_m

---deformation value in millimeters (mm); ΔL_1

---the circumferential difference before the test, the unit is mm (mm); ΔL_2

---The circumferential difference after the test, in millimeters (mm). The calculation result retains a valid number.

8.3 expansion ratio Calculated by the ratio of the average circumference of the test to the average circumference before the test, calculated according to formula (2). $\Delta R = L_2 / L_1$ (2)
In the middle ΔR

---expansion ratio; L_1

---average circumference before test, in millimeters (mm); L_2

---The average circumferential length after testing, in millimeters (mm). The result of the calculation retains two significant digits after the decimal point.

8.4 Percentage change of air pressure in the ball The amount of change in the gas pressure in the sample after the test is expressed as a percentage of the gas pressure in the sample before the test, and is calculated according to the formula (3). $X = (P_2 - P_1) / P_1 \times 100$