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

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**Safety and capability requirements and testing methods for
barbell of weightlifting**

举重杠铃的安全、性能要求和试验方法

(English Translation)

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Foreword

This standard 3.4.1,3.4.5 mandatory, others are recommended.

This standard adopts the International Weightlifting Federation (International Weightlifting Federation, IWF referred IWF) weightlifting competition all technical content rule 3.1.

The standard proposed by China National Light Industry Council.

This standard by the National Standardization Center stationery.

This standard was drafted. Shanghai Double Happiness Co., Ltd. is responsible for drafting. Hebei Zhang hole barbell Manufacturing Co., Ltd., Tianjin Spring sports together Products Factory, Taishan Sports Industry Group Co., Ltd., Jiangsu Jinling Sports Equipment Co., Ltd.

1 Scope

This standard specifies the safety and performance requirements and test methods weightlifting barbell.

This standard applies to competitions and weightlifting barbell exercises use.

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.

Corrosion test method neutral salt spray test QB/T 3826-1999 light industrial products metal plating and chemical treatment layer (NSS) method QB/T 3832-1999 Evaluation of light

industrial products metal coating corrosion test results

3 Requirements

Basic dimensions and parameters 3.1 weightlifting barbell Basic dimensions and parameters weightlifting barbell should meet the requirements of Table 1. Table 1 Part Names Figure 1.

Table 1 millimeters

Part Name

Basic size limit deviation Man Woman barbell contest type exercise type Barbell total length 2200 2010 $\pm 1.00 \pm 2.00$ Two from the inside of the sleeve 1310 $\pm 0.50 \pm 2.00$ Barbell diameter (smooth part) 28 25 $\pm 0.03 \pm 0.10$ Barbell largest diameter 450 $\pm 1.00 \pm 2.00$ the outer diameter of the sleeve 50 0-0.20-0.20 Sleeve shoulder width 30 $\pm 0.50 \pm 1.00$

Figure 1 weightlifting barbell member name

Quality 3.2 weightlifting barbell 3.2.1 weightlifting barbell quality of each part should meet the following requirements.

Quality a) barbell (including sleeve). Men barbell 20kg, Women barbell 15kg;

Quality b) the locking device is 2.5kg;

Quality c) barbell sheet. 25kg, 20kg, 15kg, 10kg, 5kg, 2.5kg, 2kg, 1.5kg, 1kg, 0.5kg.

3.2.2

Each part of the quality of the barbell limit deviations shall conform to Table 2.

Table 2

Mass range

Limit deviation

Competition type Exercise type $\geq 10\text{kg}$ parts $+ 0.10\% -0.05\% + 0.20\%-0.10\%$ $\leq 5\text{kg}$ parts $+ 10\text{g}$ $0\text{g} + 15\text{g}-10\text{g}$

3.2.3

All the barbell should be clearly identified in the quality of its sides.

3.3 Weightlifting barbell color

Color 3.3.1 barbell should meet the requirements of Table 3.

Table 3

Specifications 25kg 20kg 15kg 10kg 5kg 2.5kg 2kg 1.5kg 1kg 0.5kg Color Red Yellow

Green Blue White Red Yellow Green Blue White

3.3.2

The barbell application diameter 450mm rubber or plastic wrap, and permanent color.

3.3.3

Man barbell rod end should be marked in blue, woman barbell club ends should be marked in yellow, respectively, and approximately 20kg barbell Color 15kg barbell tablets.

Safety and performance requirements 3.4 weightlifting barbell

3.4.1 The barbell should be free of cracks, endanger the safety deficiencies slag bubbles.

3.4.2 Man barbell by static load 3800N, 2800N woman barbell by static load, after removal of the external force, barbell bar Runout requirements are. competition type should be less than 0.6mm, practice type should be less than 1.0mm.

3.4.3 barbell with sleeve should be flexible rotation.

3.4.4 1.5kg less than or equal to a barbell loaded barbell should be easy to slide back.

3.4.5 locking device should be capable of locking the total mass of 150kg barbell.

3.4.6 In the middle of the bar and the two shook hands at the proper distance textured knurled pattern should be clear and consistent. Knurled location and size of discontinuities see 2, FIG.

Millimeters

Figure 2 man barbell

Millimeters

3 Women barbell

3.4.7 encapsulated barbell piece of rubber (or plastic) should be combined with a solid core barbell.

3.4.8 plating parts coating corrosion resistance, according to QB/T 3826-1999 provides corrosion resistance level of not less than six.

Test Method 4

4.1 weightlifting barbell basic parameters and dimensions and knurled handshake at length measurements. length dimension all dedicated ruler or the corresponding accuracy class Steel tape measure, other dimensions with the corresponding levels of precision calipers, micrometer measurements.

Quality 4.2 weightlifting barbell various parts of measurements. with the appropriate levels of precision electronic weighing scales or balance.

Cracks and other defects 4.3 barbell safe use of non-invasive testing method to check.

4.4 load test barbell bar. the barbell without socket mounted on a testing machine having a predetermined pitch, predetermined pitch in Table 4, the touch Point spacing of 300mm pressure head with a barbell lever contact (see Figure 4), is loaded into the load specified in Table 4, keeping 2min, then uninstall. Press

4.5 The method of measuring the runout errors.

Table 4

Variety testing machine spacing applied load Man barbell 2100mm 3800N Woman barbell 1930mm 2800N Millimeters

Figure 4 load test barbell bar

Runout measuring 4.5 barbell bar. barbell will not be placed in the sleeve with two shelves, brackets pitch man for the barbell 2050mm, woman barbell to 1850mm. The surface of the dial indicator table header with a barbell bar intermediate vertical contacts at all smooth, then rotate the lever Bell pole week. Maximum dial indicator maximum reading and minimum reading is the difference between a barbell runout values.

4.6 1.5kg barbell slide test. place the barbell to its axis 30 ° from the horizontal posture, as shown in Fig. The locking device locking in the sleeve by the shoulder position, and then 1.5kg barbell from the lower end of a barbell set into the placement of the barbell and by locking device to watch Examine whether the free fall.

Figure 5 barbell slipped test

4.7 150kg barbell locking test. As shown in FIG. 6, the total mass of 150kg barbell piece from one end of the rod and set the barbell by the shoulder to the sleeve, the locking with the locking device. Then place the barbell to its tilt axis 30 ° from the horizontal posture mounted barbell sheet End down. Observe whether the locking slide or barbell. Observation time was 2min.

Figure 6 barbell lock test

4.8 plating corrosion resistance test. QB/T 3826-1999 specified continuous spray after 24h, corrosion level should not be less than

6 QB/T 3832-1999 the provisions.

4.9 color, rotation flexibility, appearance, and other requirements to the senses determination.