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The specifications of testing equipment and measuring appliance for bicycle

自行车检测设备和器具技术条件

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1 Subject content and scope of application

This standard specifies the basic technical requirements for bicycle-specific testing equipment and measuring appliances AND the general technical requirements for general testing equipment and measuring appliances used for bicycle.

This standard applies to bicycle-specific testing equipment and measuring appliances, as well as general testing equipment and measuring appliances used for bicycle.

2 Normative references

GB 1804 General tolerances - Tolerances for linear dimensions without individual tolerance indications

GB 1184 Geometrical tolerancing - Geometrical tolerance for features without individual tolerance indications

3 Basic technical requirements for bicycle-specific testing equipment and measuring appliances

3.1 General technical requirements

3.1.1 The testing equipment and measuring appliances shall meet the technical requirements for bicycle testing. The design of equipment and appliances shall have reasonable layout, beautiful appearance, reliable performance, easy operation, easy maintenance, good moisture resistance, etc. Meanwhile, it shall comply with relevant national basic standards.

3.1.2 The design of equipment and appliances must ensure the safe operation of users; reliable protective devices shall be installed, when necessary.

3.1.3 The nameplate on the equipment shall be fixed in an obvious position; appliances without nameplates shall be numbered.

3.1.4 Equipment and appliances shall have instructions, that can correctly guide installation, adjustment, use and maintenance, as well as the packing lists and

calibration certificates (only calibration certificates are allowed for appliances of simple structures).

3.1.5 The management of testing equipment and appliances must comply with the Measurement Law of the People's Republic of China and relevant measurement regulations.

3.2 Accuracy of main parameters

3.2.1 Speed: Tolerance ±2.5%.

3.2.2 Mass: Tolerance ±1%.

3.2.3 Force: Tolerance ±1%.

3.2.4 Count (Constant amplitude vibration, number of circular revolutions): Tolerance ±0.05%.

3.2.5 For free angle tolerance, see Table 1.

Note:

1. Nominal size refers to the length of the short side of the angle.

2. The tolerance is distributed symmetrically about the zero line.

3.2.6 Temperature: Tolerance ±2 °C.

3.2.7 Drop weight height error: According to level js14, which is specified in GB 1804.

3.2.8 Amplitude error: According to level js14, which is specified in GB 1804.

3.2.9 The heat treatment hardness of the contact surfaces of rollers, cams, anvils, drop weights is greater than or equal to HRC50.

3.3 Other requirements

3.3.1 Loading speed during static detection: Less than or equal to 4 mm/s,

3.3.2 Unloading speed during static detection: Approximately equal to 20 mm/s,

Appendix A

Technical requirements for several major testing equipment

(Supplementary)

A1 Impact strength testing equipment of frame and front fork assembly (see Figure A1)

A1.1 The line BC, which connects the front fork's roller center B and the rear axle's positioning pin center C, shall be parallel to the base surface of the equipment. The parallelism tolerance is 2 mm.

A1.2 There shall be a fixing device (pin or shackle, etc.) for fixing the weight above the center C of the rear axle's positioning pin. The line DC, which connects the center of gravity D of the fixed weight and the center C of the rear axle's positioning pin, shall be perpendicular to the installation base surface of testing machine. The perpendicularity tolerance is 1.2 mm.

A1.3 The size ratio of the load block, at the saddle tube, is l × b × h : 2 × 1 × 1.

A2 Drop weight test equipment for frame and front fork assembly (see Figure A2)

A2.1 At the point A at both ends of the roller, which is installed in the front fork, shall have guide rails for various specifications of bicycle models and deformation during the test. The guide grooves of the guide rails shall be symmetrical to the center line of

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