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PEOPLE'S REPUBLIC OF CHINA**

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Test method for tyre valve - Part 6: Test method for core

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1 Scope

This document specifies the test equipment and instruments, installation, air-tightness test, torque test, fatigue resistance test, ventilation rate test, corrosion resistance test, connection test between core cap and core body, opening pressure test and core rod head position measurement of tyre valve core (hereinafter referred to as valve core).

This document is applicable to valve core test for tyre valves of passenger vehicles, trucks, industrial vehicles, construction machinery, tractors, agricultural and forestry machinery, motorcycles, electric vehicles and rickshaws.

This document is not applicable to the valve core test for aircraft tyres.

2 Normative References

The contents of the following documents constitute indispensable clauses of this document through the normative references in the text. In terms of references with a specified date, only versions with a specified date are applicable to this document. In terms of references without a specified date, the latest version (including all the modifications) is applicable to this document.

GB/T 1796.6 Tyre Valves - Part 6: Cores

GB/T 9764 Tyre Valve Core Chambers

GB/T 10125-2012 Corrosion Tests in Artificial Atmospheres - Salt Spray Tests

GB/T 12839 Terms and Definitions of Tyre Valves

3 Terms and Definitions

The terms and definitions defined in GB/T 12839 are applicable to this document.

4 Test Equipment and Instruments

The test equipment and instruments for the valve core are as follows.

- a) Low-temperature test chamber: the temperature in the chamber can reach below -40°C , with a temperature fluctuation of $\pm 2^{\circ}\text{C}$.

During the installation, entrained gas is not considered as a leakage.

6.1.3 High-temperature air-tightness test Put the valve core that has been qualified in the test of 6.1.2, after restoring to room temperature, together with the inflation device, into a high-temperature test chamber with a temperature of $(100 \pm 3)^{\circ}\text{C}$; inject $(1,400 \pm 150)$ kPa compressed gas; maintain for 48 h. Open the test chamber; immediately immerse the inflation device equipped with the valve core in water at $(66 \pm 3)^{\circ}\text{C}$; the valve mouth shall be no more than 25 mm from the liquid surface. Within 60 s, observe and record whether there are bubbles escaping from the valve mouth.

During the installation, entrained gas is not considered as a leakage.

6.1.4 Maximum temperature air-tightness test Put the valve core that has been qualified in the test of 6.1.3, after restoring to room temperature, together with the inflation device, into a high-temperature test chamber with a temperature of $(135 \pm 3)^{\circ}\text{C}$; inject $(1,400 \pm 150)$ kPa compressed gas; maintain for 1 h. Open the test chamber; immediately immerse it in water at $(66 \pm 3)^{\circ}\text{C}$; the valve mouth shall be no more than 25 mm from the liquid surface. Within 60 s, observe and record whether there are bubbles escaping from the valve mouth.

During the installation, entrained gas is not considered as a leakage.

6.2 Air-tightness Test of H03C, H04C, H05C and H07C Valve Cores At room temperature, vertically place the inflation device equipped with H03C, H04C, H05C and H07C valve cores as described in Chapter 5 into clean water at $(23 \pm 5)^{\circ}\text{C}$;

the valve mouth shall be no more than 25 mm away from the water surface. Inject $(1,050 \pm 150)$ kPa compressed gas; within 60 s, observe and record whether there are bubbles escaping from the valve mouth.

During the installation, entrained gas is not considered as a leakage.

7 Torque Test Install H01, H02 and H06C valve cores in accordance with twice the maximum torque valve specified in GB/T 1796.6 in the corresponding core chamber that complies with

GB/T 9764. Then, remove the valve core; observe whether the core cap is separated from the core body, whether the sealing ring is separated from the core body, and whether the core cap is broken.

8 Fatigue Resistance Test After installing H01, H02 and H06C valve cores into the mouth, inject (1,400 ? 150)

kPa compressed gas; press the core rod for 120 times to the largest extent. Then, place it into clean water at (23 ? 5) °C; the mouth shall be no more than 25 mm away from the water surface. Within 60 s, observe and record whether there are bubbles escaping from the valve mouth.

During the installation, entrained gas is not considered as a leakage.

9 Ventilation Rate Test Install H01, H02 and H06C valve cores on the test device shown in Figure 2. Maintain the valve cores in a fully open state. Open the globe valve; adjust the intake pressure to 690 kPa; observe and record the reading of the gas flow meter.

10 Corrosion Resistance Test Install H01, H02 and H06C valve cores into the corresponding core chamber that complies with GB/T 9764. In accordance with the stipulations of GB/T 10125-2012, perform 240 h of neutral salt spray test.

The valve cores must not manifest any corrosion that may affect the functions.

In accordance with the maximum pressure specified in GB/T 1796.6, perform the air-tightness test. Within 60 s, observe and record whether there are bubbles escaping from the valve mouth.

The valve cores shall be able to be normally removed from the valve.

11 Connection Test between Core Cap and Core Body Respectively clamp the core cap and core body of H01, H02 and H06C valve cores on the upper and lower chucks of the tensile testing machine. Then, actuate the tensile testing machine; operate it at a constant speed of (100 ? 10) mm/min. The entire stretching process shall be carried out along the axis direction of the core body and core cap of the valve core. The maximum tensile force in the process of separating the core cap from the core body is the connection tensile force between the core cap and the core body.

12 Opening Pressure Test In accordance with the test device in Figure 3. Turn on the gas source; adjust the pressure of H01 valve core to 275 kPa; adjust the pressure of H02 valve core to 450 kPa.

In accordance with the stipulations of Chapter 5, install the valve core in the valve core

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