HCBB-01 Brake Belt Friction and Wear Testing Machine

One.Main purpose and scope of use

The HCBB-01 brake band friction and wear tester is mainly used to test the wear resistance, braking performance, and service life of brake bands under constant temperature, humidity, and room temperature conditions. You can also learn about the heating situation of the brake band during the test process.

The machine has a frame structure, with unit settings for various test parameters, easy operation, accurate and reliable test readings, and can be easily controlled through a computer. It can display real-time friction time and temperature time curves, and record, save, and print test curves.

Two. Main technical specifications:

1. Test load: 0-1000N (indication error ± 0.5%)

2. Speed (stepless speed regulation) Rotation mode: 0-1000rpm

Angular acceleration: -50~50 rad/s ² (indication error ± 1%)

3. Environmental temperature setting and measurement range: -15~60℃

4. Surface temperature measurement range: 0-60℃

5. Environmental humidity setting and measurement range 0-100% RH (accuracy ± 3%)

6. Controllable lubrication state includes dry friction, oil lubrication, and boundary lubrication

7. Measurement range of rotational friction torque: 0~50N.m (indication error ± 2%)

8. Rotation method of standard specimen: as shown in Figure 1, dual component: one end of the brake band is fixed, and the other end of the brake band is loaded; Brake drum rotation and brake band friction

9 . Clamping method: It can clamp physical brake drums and brake bands. The physical dimensions refer to the drawings, and a set of standard matching parts are provided (refer to the brake drum attachment for the drawings)

10. The testing machine can conduct friction and wear tests in three different ways, and different tests require different parameters to be measured and recorded. The following are listed below:

Normal temperature and humidity rotation mode: load, friction torque, sample surface temperature, rotational speed, indoor humidity, operating time, spindle temperature

Specify temperature and humidity rotation method: load, friction torque, sample surface temperature, chamber humidity, chamber temperature, rotational speed, running time, spindle temperature

Program rotation mode: Set four stages of angular acceleration and running time: for example, (angular acceleration 10rad/s ²: 10s+angular acceleration 0 rad/s ²: 20s+angular acceleration -15rad/s ²: 10s+0RPM: 30s) as one cycle: load, friction torque, sample surface temperature, chamber humidity, chamber temperature, rotational speed, running cycle, and spindle temperature. (The device controls the acceleration and deceleration time through parameter settings on the upper computer, measured in milliseconds, with a minimum of 1ms and a maximum of 1000ms, accelerating or decelerating from 0 to the set speed)

11. Draw chart curves: load time, friction force (moment) time, surface temperature time, chamber temperature time, chamber humidity (environmental humidity) time, linear velocity time and friction coefficient time curves, wear rate time curves

12. Measurement time range: 0-99999s/99999min, storing curves and data during the testing cycle

Three. Working conditions of the testing machine

1. Within the temperature range of 10 ℃ -35 ℃, the relative humidity should not exceed 80%;
2. Correctly installed on a stable foundation or workbench;
3. There is no vibration or corrosive medium around;
4. Power supply: A set of three-phase four wire 380V/16A power supply (control cabinet); A set of 220V/25A single-phase two-wire power supply (host);
5. The fluctuation range of the power supply voltage should not exceed ± 10% of the rated voltage;
6. The power supply of the testing machine should be reliably grounded; The frequency fluctuation should not exceed 2% of the rated frequency;
7. The minimum line load is 10KW.

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