HBBF-1 Constant speed friction tester

One.Product Description

Appearance reference picture

The HBBF-1 type constant speed friction tester is a special device for testing the friction and wear properties of friction materials.The material of the test is soft (ordinary woven products and

similar products), semi hard (soft molded products) or hard products (special processing knitted products, moulded products, semi molded products, semi metal moulded products and similar products).

The constant speed friction tester is strictly in accordance with the regulations of JC/T 1065,JIS D4411,GB5763-98 and GB/T5764-98 standard.On the basis of keeping the basic principles and structures of HP -S prototypes in Japan and D-MS machines in China, aiming at the defects and shortcomings exposed in many years' practical applications,combined with modern computer technology and improved design, it is the replacement product of MDS-1 test machine.

Two. Technical parameters

Friction disk: material HT250 hardness HB180-220 pearlite tissue

Friction disk speed: 480 ± 10 rpm

Drive motor: 7.5kW, 970 rpm

Test piece: 25 x 25mm thickness 5~7mm;2 pieces.

Min surface pressure: 3Kgf/cm2 （37.5kg）no weight.

Max surface pressure: 10Kgf/cm2 (125kg). Load weight 1.25 kg ×1 piece

2.5 kg ×3 pieces;

(note: for each additional 1.25kg of load weight, the test piece surface pressure is increased by 1kg/cm2;)

Load Range: 150kgf,Accuracy:0.1％

Temperature controlling precision: ±10℃

Heating power: 4.5 kW

Test machine size: host 1240 mm×1100 mm×2000 mm

Weight： 500kg

*The above parameters are standard, and you can choose the speed (stepless adjustable 1000r/min, 2000r/min, 3000r/min, 5000r/min), loading method (weight loading, fully automatic loading 1000N, 2000N, 5000N, 10KN), and test block size according to your research and development needs;

Three、Structural Principle of Constant Speed Friction Tester

3.1 The power is transferred from the motor 13 to the machine tool spindle through the belt, which rotates the friction disc 2 mounted on the spindle.

3.2 Pressure shaft 4 is connected with sprocket 6 and specimen support arm 3. Load of load weight 12 is loaded through lever 7, magnified 10 times, and then pressed on friction disk 2 through pressure shaft 4 and specimen support arm 3.

3.3 One end of the tension and compression sensor is connected with the body, and the other end is connected with the chain on the sprocket. Under the action of friction, the sprocket and the specimen support arm twist an angular displacement, and the magnitude of friction force is measured by the chain on the tension and compression sensor.

3.4 The vibration generated during the test is absorbed by the buffer mounted on the rack. The buffer is connected with the sprocket through the rotating arm, and the adjusting rod of the rotating arm is connected with the sprocket. By adjusting the throttle valve adjusting bolt on the piston rod of the buffer, the hydraulic buffer 10 can achieve the best vibration reduction effect. The position of the buffer piston is adjusted by the adjusting rod of the rotating arm.

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