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JJG

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

JJG 652-2012

Replacing JJG 652-1990

**Verification Regulation Rotating Pure Bending Fatigue Testing
Machines**

(English Translation)

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Introduction

JJF1002 "national verification procedures write rules", JJF1001 "common measurement terms and definitions" JJF1059 "Evaluation and Expression of Uncertainty in Measurement" constitute support this protocol revision of the basic series specification.

This procedure is a revised version of JJG 652-1990. Compared with JJG 652-1990, in addition to editorial changes Outside the main technical changes are as follows.

- Increased introduction;
- Coaxial index replaces the static radial runout original regulations spindle drum (see 5.1.1);
- Increasing the initial moment indicators (see 5.1.4.2);
- Increasing the moment repeatability relative error indicators (see 5.1.4.3);
- Deleting force Repeatability error indicators;
- Increasing the speed indicator (see 5.2) with the corresponding requirements of the test, the calculation method;
- Counter made specific assessment indicators (see 5.3);
- Index increased temperature testing machine temperature control system (see 5.4) in accordance with requirements and test;
- Added afterburner system, drive system, cycle counter, temperature control system of the general requirements (see 6.2);
- Increased testing machine safety requirements (see 6.3);
- Increased testing machine work noise limits (see 6.4);
- Added Appendix A coaxial test rods technical requirements (for reference);
- Perfect test Appendix B recording format;
- Improved test certificate appendix C page format;
- Improved test results Appendix D notice-page format;
- Added Appendix E testing machine working principle diagram;
- Added Appendix F test Schematic test force.

JJG 652-1990 for the first release.

Rotating pure bending fatigue testing machine test procedures

1 Scope

The order applies to rotating pure bending fatigue testing machine (hereinafter referred to as test machine) initial verification, subsequent verification and the use of checks. Rotating pure bending fatigue testing machine includes four force rotating pure bending fatigue testing machine, hanging Arm rotating pure bending fatigue testing machine and high-temperature rotating pure bending fatigue testing machine.

Other types of rotating bending fatigue test machine can refer to this procedure for examination.

2. References

This procedure references the following documents.

JJF1315.2-2011 fatigue testing machine model evaluation framework - Part 2. Rotating pure bending fatigue testing machine GB/T 2611-2007 General requirements for testing machines GB 4337-2008 metallic material rotating bending fatigue testing method GB/T 11158-2008 high temperature test chambers JB/T 9374-1999 pure bending fatigue testing machine technical conditions for dated references, only the dated edition applies to this procedure; undated references the latest version (including any amendments) applies to this procedure.

3 Terms and symbols

3.1 Terms and Definitions the following terms and definitions apply to this procedure.

3.1.1 The arm length momentarm the distance between the fulcrum to the lifting point (see Figure 1). For the four-point type rotating force fatigue testing machine, L1 and L2 are equal.

3.1.2 endurance limit stress Corresponding to a predetermined number of cycles, such as 10⁷ or 10⁸, the stress applied to the sample and the sample no failures occur range.

1 a schematic diagram of the measurement arm RA, RB- samples A, B point support reactions; F1, F2- samples C, D point test force;

L1, L2, L0- lever AC, arm length and sample standard DB distance; L- sample fulcrum reaction force RA, RB pitch