

ICS 17.1
CCS A 53

JJG

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

JJG 1116-2015

Replacing JJG 734-2001

**Build-up Force Standard Machines
(English Translation)**

Issued on: June 15, 2015

Implemented on: December 15, 2015

**Issued by: General Administration of Quality Supervision, Inspection and
Quarantine**

Table of Contents

Introduction (III)	
1 Scope (1)	
2. References (1)	
3 Overview (1)	
4 Metering performance requirements (1)	
4.1 Base level of the table and pressed against the level of (1)	
4.2 Identification of force, force value repeatability force value indication error, 30s load fluctuations and heading error (1)	
5 General Requirements (2)	
5.1 Grounds (2)	
5.2 Electrical and mechanical systems (2)	
6 Control of measuring instruments (2)	
6.1 Verification condition (2)	
6.2 Test items and test methods (3)	
6.3 Verification Results Processing (6)	
6.4 Test cycle (6)	
Appendix A Test recording format (7)	
Appendix B Test certificates/test results in the notice page format (8)	

4.1 Base level of the table and pressed against the level of (1)

4.2 Identification of force, force value repeatability force value indication error, 30s load fluctuations and heading error (1)

6.4 Test cycle (6)

Appendix A test recording format (7)

Appendix B test certificates/test results in the notice page format (8)

Introduction

The procedure according to the rules JJF1002 "national verification procedures write rules" provisions of the preparation.

This procedure separates JJG 734-2001 "force standard machine" section on force standard machine out single Alone developed a force standard machine verification. Up

force within the relevant standards and JJG 734-2001 Edition machine parts Capacity compared to, in addition to editorial changes outside the main technical changes are as follows.

- Increasing the reference document (see 2);
- Modify the standard dynamometer technical requirements (see Table 5);
- Revised and increased the initial verification before the force standard machine should have the technical information (see 6.1.2);
- Modify the force standard machine accuracy class (see Table 2);
- Delete on the drop-down head concentricity requirements;
- Increasing the azimuth error indicators (see Table 2) and azimuth error test method (see 6.2.2.5);
- For the return superimposed machine, increase the return force Repeatability error and force requirements (see Table 2), Increase the return of the test method (see 6.2.2.5);
- When performed force error and azimuth error test, recommended use azimuth angle 0 °, 120 °, 240 ° azimuth position 6.2.2.5);
- Increased discrimination initial load is calculated (see equation 7);
- Modify the description and the method of calculation of load fluctuations, increase the calculation formula (see 6.2.2.7).

The regulations previously issued as follows.

--- JJG 734-2001 "force standard machine"

--- JJG 753-91 "force standard machine" Force standard machine test procedures

1 Scope

The order applies to initial verification force standard machine, and use the subsequent verification check.

2. References

JJG 144-2007 standard dynamometer JJG 391-2009 force sensor JJF1011-2006 force value and hardness measurement terms and definitions JJG 2045-2010 force value ($\leq 1\text{MN}$) Measuring Instruments Verification System JJG 2066-2006 strong value measuring instruments Verification System for dated references, only the dated edition applies to this procedure; undated reference documents Member, the latest edition (including any amendments) applies to this procedure.

3 Overview

Force standard machine (hereinafter referred to as the superposition machine) is a (or group) ratio is verification and calibration of the dynamometer Associate Really high standard dynamometer as the reference standard, to be detected force gauge (or force sensor) series, hydraulic or mechanical Applying a force standard machine force value approach. Force standard machine is mainly used for a variety of dynamometer, force sensors and load cells Test and calibration.

4 metering performance requirements 4.1 base level degree and level of pressure to the table Superimposed machine base level of the table and pressed against the level of requirements in Table 1.

Table 1 and the base level of pressure to the level of the table

Base level degree

mm/m

Levelness of the bench press mm/m 0.3 0.3

4.2 Identification of force, force value repeatability force value indication error, 30s load fluctuations and azimuth error Requires discernment, Repeatability force, force value indication error, 30s load fluctuations and heading error are shown in Table 2.

Table 2 discernment, Repeatability force, force value indication error, load fluctuations and azimuth error

Accuracy

grade

Discernment

Repeatability R /% maximum permissible error delta /% Return Process Return Process
30s Load Volatility fl /% Bearing error Epm /% 0.03 0.01 0.03 0.03 ± 0.03 ± 0.03 0.01 0.06
0.05 0.02 0.05 0.05 ± 0.05 ± 0.05 0.02 0.1