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JJF

NATIONAL METROLOGY TECHNICAL SPECIFICATION OF THE PEOPLE'S REPUBLIC OF CHINA

JJF 1408-2013

Calibration Specification for Articulated Arm Coordinate Measuring Machines

关节臂式坐标测量机校准规范

(English Translation)

Issued on: May 13, 2013 **Implemented on: August 13, 2013**

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

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Introduction

The specification for the first time to develop. The main basis for performance measurement and calibration methods ASMEB89.4.22 "articulated arm CMM performance evaluation methods "(MethodsforPerformanceEvaluationofArticulatedArm CoordinateMeasuringMachines) were prepared.

Articulated arm coordinate measuring machine calibration specification

1 Scope

This standard applies to the calibration of articulated arm coordinate measuring machine.

2. References

This specification refers to the following documents.

JJF 1071-2010 National Calibration Specifications writing rules ASMEB89.4.22 articulated arm coordinate measuring machine performance evaluation method

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(MethodsforPerformance EvaluationofArticulatedArmCoordinateMeasuringMachines) for dated references, only the dated edition applies to this specification; undated reference documents Member, the latest edition (including any amendments) applies to this specification.

3 Terms

3.1 club standardbar, balbar the amount of two or more of the same diameter as a standard ball by the rigid connecting rod composed regulation.

Note: center club length is the standard length ball center of the space. Reference ASMEB89.4.22.

4 Overview

Articulated arm coordinate measuring machine, also known as portable 3D measuring arm, crank-type coordinate measuring machine (hereinafter referred to as the measurement arm). Measurement is based on the rotation arm joints and rotating arm coordinate measurement system by the angle at each joint compilation Angle encoder measurement information obtained through the coordinate transformation to obtain the coordinates of the probe in the instrument coordinate system.

Measuring arm joints generally consists of three components, namely, shoulder, elbow and wrist, shoulder should include A and B Shaft, including the D shaft elbow, wrist and includes E and F shaft. Probe is mounted on a shaft final, Achieved by manual measurements. Common 5-axis measuring arm, 6-axis and 7-axis several configurations, 1 to 4 FIG.

Figure 12-1-2 constructed by ABDEF rotation axis configuration according to FIG 22-2-2 ABCDEF rotation axis

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