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

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**Calibration Specification for Three Axis Tables
(English Translation)**

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Introduction

This specification is a metrological specification for the calibration of triaxial turrets for inertial products. The main process of the preparation of this specification Reference should be made to JJF 1210-2008 Calibration Specification for Low-speed Rotating Tables and GJB1801-1993 Inertial Technology Testing Design Prepare main performance test methods.

This specification is the first release.

Triaxial table calibration specifications

1 Scope

This specification specifies the calibration items and calibration methods for triaxial turrets for inertial products.

2 references

JJF 1210-2008 Low speed turntable calibration specification GJB585A-1998 Inertial Terms GJB1801-1993 Main Performance Test Method for Inertial Test Equipment GJB5878-2006 General Specification for Dual-Axis Test Turntable for dated references, only dated editions apply to this specification; all undated references the latest version (including all amendments) applies to this specification.

3 Terms

The following terms, definitions and symbols established by GJB1801-1993 and GJB585-1998 apply to this specification.

3.1 Three-axis intersection three-axis intersection Three mutually perpendicular axes of rotation, and the extent to which they are expected to intersect at one point.

3.2 angular position positioning stability angularpositionstability the amount of change in the angular position of the turntable within the specified time.

4 Overview

The three-axis rotary table is mainly composed of mechanical table bodies, electric control cabinets, system software and special cables. Mechanical table package Including. Three orthogonal working axes, corresponding frames, mounting bases for the DUT, and base. The shaft is equipped with a measuring angle Parts, drive components, and conductive slip rings. The three working axes are usually referred to as relative positions. the inner shaft, the middle shaft, and the outer shaft.

That is, the inner shaft is supported by the middle frame, the middle shaft is supported by the outer frame, and the outer shaft is supported by the base. The form of the frame is U-shaped and O Two kinds of shape, the overall structure of UOO, UUT, OOT, OOO and other combinations. The mounting base of the device under test There are two kinds of frame type and table type. Frame mounting bases require a dedicated mounting plate. The control cabinet can be one or more One, built-in measurement control unit (or computer), driver and power supply and other electrical components.

Three-axis turntables should provide accurate coordinate references and motion references for product testing. Since the inertial system can be sensitive to the earth Changes in velocity and gravitational acceleration. Tests usually require that the product (via turntable) be different from the local geographical coordinates.

direction. As a coordinate reference, the three orthogonal working axes of the mechanical table can establish an accurate coordinate system, using the angular position the bit pattern

can easily achieve various directions. In order to ensure the invariance of the coordinate system, the level of the base should be adjusted during the installation of the turntable.

The position of the turntable is determined by using the orientation mirror on the table body and the orientation of the place of installation. For example, a vertical three-axis rotary table the outer axis refers to the sky. Generally, the orientation of the central axis of the horizontal position is determined by the orientation mirror (east or north direction). To determine the turntable