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JJF 1426-2013

Calibration Specification for Dynamic Parameters of Linear Accelerometer Used Double Centrifuge

双离心机法线加速度计动态特性校准规范

(English Translation)

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Introduction

This specification is a reference JJF 1116-2004 "linear accelerometer calibration precision centrifuge norms" on the basis of Proposed dual centrifuge line accelerometer dynamic calibration method. Calibration principles of the present specification is given, and the National International standards IEEE836-2009 "IEEE Recommended linear accelerometer sophisticated centrifuge test specifications" Appendix E Related Content match.

Double the normal accelerometer dynamic characteristics of centrifuges Calibration Specification

1 Scope

This standard applies to the use of the dynamic characteristics of double centrifuge line accelerometer calibration.

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2. References

JJF 1116-2004 linear accelerometer calibration precision centrifuge specifications GJB585A-1998 inertial technology terms IEEE836-2009 IEEE Recommended linear accelerometer sophisticated centrifuge test specifications (IEEERecom-mendedPracticeforPrecisionCentrifugeTestingofLinearAccelerometers).

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 and Definitions GJB585A-1998 and established the following terms and definitions apply to this specification.

3.1 pairs centrifuge doublecentrifuge and from the main centrifuge centrifuges, which produces dynamic acceleration signal it can be used as input to the linear accelerometer Dynamic calibration. From the centrifuge mounted on the main dial or turn the centrifuge arm, and the rotating shaft of the main rotating centrifuge Parallel to the axis of rotation and at the same time generating a sinusoidal acceleration signal from the centrifuge through the primary centrifuge. Centrifuges used to achieve the main the magnitude of the acceleration signal from the centrifuge to achieve frequency and phase of the acceleration signal.

3.2 Sensitivity amplitudesensitivity Inspired by the sinusoidal acceleration signal, the accelerometer output signal line peak sinusoidal component input acceleration signal Peak ratio.

3.3 phase delay Inspired by the sinusoidal acceleration signal, linear accelerometer output signal of sinusoidal components of the input signal is sinusoidal acceleration Phase component.

3.4 magnitude linearity amplitudelinearity Characterization of accelerometer output signal line peak sinusoidal component with peak sinusoidal input signal change with the changes presented non Linear characteristic.

3.5 reference frequency Online accelerometer frequency amplitude linearity calibration in preference sinusoidal input acceleration signal.

4 Overview

General linear accelerometer (hereinafter referred to as "accelerometer") of the mechanical model is approximated as a typical mass-spring resistance Nepalese second order system mechanical model, see equation (1).

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