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**Calibration Specification for Acoustic Emission Instrumentation
(English Translation)**

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Table of Contents

Introduction (II)

1 Scope (1)

2. References (1)

3 Terms and Definitions (1)

3.1 Acoustic Emission (1)

3.2 Acoustic emission signal amplitude (1)

3.3 Threshold (1)

3.4 Impact (1)

3.5 Rise Time (1)

3.5 Rise Time (1)

Duration 3.6 (1)

3.7 Ring Count (2)

Crosstalk 3.8 (2)

5.3 Dynamic Range (2)

Between 5.4 channel crosstalk (2)

6 Calibration conditions (3)

Environmental conditions 6.1 (3)

9 Recalibration interval (7)

Appendix A Recommended acoustic emission detector calibration certificate-page format (8)

Appendix B acoustic emission detector calibration Uncertainty Evaluation for instance (10)

Introduction

This specification based JJF 1071-2010 "National Calibration Specifications writing rules" establishment.

Making reference to this specification JB/T 8283-1999 "acoustic emission testing

equipment performance testing methods" and ASTM E0750-10 "acoustic emission instrument characterization methods" (Practice for characterizing Acoustic Emission Instrumentation) acoustic emission detector part of the performance parameters and test methods.

This specification is the first release.

Acoustic emission detector calibration specification

1 Scope

This standard applies to the calibration of acoustic emission detector host, without sensor and preamplifier section.

2. References

This specification references the following documents.

JJF 1001 common measurement terms and definitions JJF 1034 acoustic measurement terminology and definitions GB 3102.7-1993 Quantities and units of acoustics GB/T 12604.4-2005 Terminology for nondestructive testing - Acoustic emission testing JB/T 8283-1999 acoustic emission detector performance test method ASTM E0750-10 acoustic emission instrument characterization methods (Practice for characterizing Acoustic Emission Instrumentation) 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 this specification uses quantities and units specified in GB 3102.7-1993.

JJF 1001 and JJF 1034 and as defined in the following terms and definitions apply to this specification.

3.1 Acoustic emission Rapid release of energy within the material phenomenon generated by transient elastic waves.

[GB/T 12604.4-2005, Definition 2.1] 3.2 acoustic emission signal amplitude the maximum peak voltage amplitude of the waveform acoustic emission signals obtained.

Note: Unit V, usually expressed in dB, the reference value 1 μ V.

3.3 Threshold threshold value A predetermined voltage value, the acoustic emission signal amplitude exceeds the voltage value can be detected, usually in dB Shown, the reference value 1 μ V.

NOTE: The threshold is generally also called threshold.

3.4 strike hit

Exceeds the threshold and cause any signal acoustic emission detector channel data

collection.

3.5 rise time AE signal exceeds the first threshold value to the maximum amplitude of the elapsed time interval.

3.6 Duration durationtime AE signal exceeds the threshold for the first time to descend to the final time threshold interval.