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**Non-destructive testing — Acoustic
emission inspection — Vocabulary**

Essais non destructifs — Contrôle par émission acoustique — Vocabulaire



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Foreword

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International Standard ISO 12716 was prepared by Technical Committee ISO/TC 135, *Non-destructive testing*, Subcommittee SC 3, *Acoustical methods*.

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Introduction

This International Standard is a compilation of terms to provide a precise understanding or interpretation of acoustic emission inspection. These terms serve to secure the foundation of acoustic emission technology growth within the academic and industrial communities.

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Non-destructive testing — Acoustic emission inspection — Vocabulary

1 Scope

This International Standard defines the terminology that is used in acoustic emission inspection and forms a common basis for standards and general use.

2 Terms and definitions

2.1

acoustic emission

AE

class of phenomena whereby transient elastic waves are generated by the rapid release of energy from localized sources within a material, or the transient waves so generated

NOTE Acoustic emission is the recommended term for general use. Other terms that have been used in AE literature include:

- a) stress wave emission;
- b) microseismic activity;
- c) emission or acoustic emission with other qualifying modifiers.

2.2

acousto-ultrasonics

AU

nondestructive examination method that uses induced stress waves to detect and assess diffuse defect states, damage conditions and variations of mechanical properties of a test structure combining aspects of acoustic emission (AE) signal analysis with ultrasonic materials characterization techniques

2.3

AE signal duration

time interval between AE signal start and AE signal end

2.4

AE signal end

recognized termination of an AE signal, usually defined as the last crossing of the threshold by that signal

2.5

AE signal generator

device which can repeatedly induce a specified transient signal into an AE instrument

2.6

AE signal rise time

time interval between AE signal start and the peak amplitude of that AE signal