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

GB/T 12604.6-2021

Non-destructive testing - Terminology - Eddy current testing

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Table of Contents

1 Scope	1
2 Normative references	1
3 Terms and definitions	1
Appendix NA (informative) This document deletes the terms and definitions of GB/T 12604.6-2008	19
Appendix NB (informative) New terms and definitions added to this document compared with GB/T 12604.6-2008	20
Appendix NC (informative) Terms and definitions revised in this document compared with GB/T 12604.6-2008	21
Reference	30
Index	31

Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for Standardization Work Part 1. Structure and Drafting Rules of Standardization Documents"

Drafting.

This document is Part 6 of GB/T 12604. GB/T 12604 has released the following parts.

- GB/T 12604.1 Non-destructive testing term Ultrasonic testing;
- GB/T 12604.2 Non-destructive testing term radiographic testing;
- GB/T 12604.3 Non-destructive testing terminology penetration testing;
- GB/T 12604.4 Non-destructive testing term Acoustic emission testing;
- GB/T 12604.5 Non-destructive testing terminology magnetic particle testing;
- GB/T 12604.6 Non-destructive testing term Eddy current testing;
- GB/T 12604.7 Non-destructive testing term leak detection;
- GB/T 12604.8 Non-destructive testing term neutron testing;
- GB/T 12604.9 terminology for non-destructive testing, infrared thermal imaging;
- GB/T 12604.10 Non-destructive testing terminology magnetic memory testing;
- GB/T 12604.11 Non-destructive testing terminology X-ray digital imaging testing.

This document replaces GB/T 12604.6-2008 "Non-destructive testing terminology eddy

current testing", compared with GB/T 12604.6-2008, except

In addition to structural adjustments and editorial changes, the main technical changes are as follows.

a) According to ISO 12718.2019, the overall structure of the standard is adjusted. The terms are divided into general terms for eddy current testing and measurement-related 6 major terms, terminology related to probe, terminology related to instrument, terminology related to application, and terminology related to evaluation

Category, each category contains specific terms and their definitions;

b) Some terms and definitions have been deleted, see Appendix NA for details;

c) Some terms and definitions have been added, see Appendix NB for details;

d) Some terms and definitions have been revised, see Appendix NC for details.

The translation method used in this document is equivalent to ISO 12718.2019 "Non-destructive testing eddy current testing vocabulary".

This document has made the following editorial changes.

---Modified the standard name to be consistent with the existing series of standards;

--- Give the full English name of "SQUID" in the terminology 3.3.55;

---Add the Chinese synonym of "surface probe" in the term of 3.3.57;

---Added an informative appendix NA, which gives the deleted terms and definitions compared with GB/T 12604.6-2008;

---Informative appendix NB has been added, giving new terms and definitions compared with GB/T 12604.6-2008;

---Added an informative appendix NC, giving terms and definitions modified compared with GB/T 12604.6-2008;

---The index has been added for ease of use.

Introduction

Non-destructive testing technology is an indispensable tool for human industrialization and social development. It is also an important tool for product quality control and ensuring the safety of equipment and facilities.

The main means of full operation, but also feedback on the production process.

Non-destructive testing uses the properties of heat, force, sound, light, electricity, and magnetism of materials to

Detect, locate and measure defects or abnormalities in materials and parts in a way that does not impair the expected performance and reliability, and evaluate their performance and composition.

Organization and integrity. The application of non-destructive testing covers machinery manufacturing, chemical industry, medicine and medical treatment, energy, transportation, metallurgy, construction, water conservancy, ocean engineering,

Weaponry, aviation, aerospace, nuclear industry, sanitary food, smuggling and anti-terrorism, and public security.

There are many methods and techniques of non-destructive testing, and it has a wide range of applications. The general terminology that establishes the basis of various methods and technologies of non-destructive testing is

The primary task of various non-destructive testing standardization organizations at home and abroad to develop non-destructive testing standardization activities. GB/T 12604 "Non-destructive testing technique

"Language" is the basic and universal standard that guides my country's non-destructive testing standardization activities. GB/T 12604 aims to establish universally applicable

The terminology for testing standardized documents consists of 11 parts.

---GB/T 12604.1 Non-destructive testing term Ultrasonic testing;

---GB/T 12604.2 Non-destructive testing term radiographic testing;

---GB/T 12604.3 Non-destructive testing terminology penetration testing;

---GB/T 12604.4 Non-destructive testing term Acoustic emission testing;

---GB/T 12604.5 Non-destructive testing terminology magnetic particle testing;

---GB/T 12604.6 Non-destructive testing term Eddy current testing;

---GB/T 12604.7 Non-destructive testing term leak detection;

---GB/T 12604.8 Non-destructive testing term neutron testing;

---GB/T 12604.9 terminology for non-destructive testing, infrared thermal imaging;

---GB/T 12604.10 Non-destructive testing terminology magnetic memory testing;

---GB/T 12604.11 Non-destructive testing terminology X-ray digital imaging testing.

This document is Part 6 of GB/T 12604, which covers eddy current testing from the aspects of general purpose, measurement, probe, instrument, application and evaluation.

Definition of terms. This revision of GB/T 12604.6 focuses on the connection with the international standard of eddy current testing terminology, and clarifies the eddy current

Testing terminology, the file structure is adjusted, so that there is a basis for formulating eddy current testing methods and product documents, so as to give play to the basis of terminology documents.

This universal support function can better promote non-destructive testing trade, communication and technical cooperation.

Non-destructive testing terms Eddy current testing

1 Scope

This document defines the terms and definitions of eddy current testing.

2 Normative references

There are no normative references in this document.

3.1 General terms for eddy current testing

3.1.1

Backgroundnoise

Noise (3.1.26) caused by changes in the geometry and metallurgical structure of the inspected part.

Note. These effect changes can also be used as test objects.

3.1.2

Balance

A signal processing in which the signal detection operating point (3.5.20) is compensated to a predetermined value.

Note. For example, the predetermined value can be set to 0.

3.1.3

Bandwidth

The frequency range over which the signal is linearly transmitted or amplified.

Note 1.The bandwidth is determined by the upper and lower cutoff frequencies. According to convention, the upper and lower cutoff frequencies correspond to 3dB signal amplitude attenuation.

Note 2.This definition applies to any or all units of the system, such as filters (3.4.14), cables or amplifiers.

3.1.4