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

GB/T 45391-2025

**Non-destructive testing instruments - Equipment for eddy
current examination - Array probe characteristics and
verification**

(English Translation)

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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 for standardization documents" Drafting.

This document is equivalent to ISO 20339:2017 "Performance and verification of array probes for non-destructive testing eddy current testing equipment".

The following minimal editorial changes were made to this document.

--- Change the name of the standard to "Performance and inspection of array probes for non-destructive testing instruments and eddy current testing equipment".

1 Scope

This document specifies the functional characteristics of eddy current array probes and their connected components and provides measurement and verification methods.

Evaluation of these characteristics allows eddy current array probes to be clearly described and compared.

Where necessary, this document recommends acceptance criteria for characteristics.

2 Normative references

The contents of the following documents constitute essential clauses of this document through normative references in this document.

For referenced documents without a date, only the version corresponding to that date applies to this document; for referenced documents without a date, the latest version (including all amendments) applies to this document.

ISO 12718 Non-destructive testing - Eddy current testing - Vocabulary lary) Note. GB/T 12604.6-2021 Non-destructive testing terminology Eddy current testing (ISO 12718:2019, IDT) ISO 15548-1 Non-destructive testing Eddy current testing equipment Part 1: Instrument performance and verification (Non-destructivetesting-Note. GB/T 14480.1-2015 Non-destructive testing instruments Eddy current testing equipment Part 1: Instrument performance and verification (ISO 15548-1:2008, IDT) ISO 15548-2:2013 Non-destructive testing Eddy current testing equipment Part 2: Probe performance and verification Note. GB/T 14480.2-2015 Non-destructive testing instruments Eddy current testing equipment Part 2: Probe performance and inspection (ISO 15548-2:2008, IDT)

3 Terms and definitions

For the purpose of this document, the terms and definitions defined in ISO 12718 and the following apply.

Element

A single physical element (such as a coil, giant magnetoresistance, or Hall element) that has a basic function (excitation or reception).

Detection unit pattern A single physical and electronic operating mode consisting of elements operating simultaneously.

Sequencing

The activation sequence of the detection unit.

Threshold

The lowest acceptable sensitivity value specified in the application documentation.