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**Non-destructive testing - Magnetic memory testing - General
requirements**

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Table of Contents

Foreword...	3
1 Scope...	5
2 Normative references...	5
3 Terms and definitions...	6
4 General requirements...	9
5 Inspected object...	10
6 Test equipment...	11
7 Preparation for testing...	12
8 Test...	13
9 Test report...	15
10 Safety requirements and personnel qualification...	16
Annex A (Informative) Example of stray field distribution of an indication...	18
Bibliography...	20

Foreword

This document is drafted in accordance with GB/T 1.1-2020 "Directives for standardization - Part 1: Rules for the structure and drafting of standardizing documents".

This document replaces GB/T 26641-2011 "Non-destructive testing - Magnetic memory testing - General principles". Compared with GB/T 26641-2011, in addition to structural adjustment and editorial changes, the main technical changes are as follows:

- a) Modify the scope (see Clause 1; Clause 1 of the 2011 edition);
- b) Modify and add normative references (see Clause 2; Clause 2 of the 2011 edition);
- c) Modify and add terms (see Clause 3; Clause 3 of the 2011 edition);
- d) Modify the method summary (see Clause 4; Clause 5 of the 2011 edition);
- e) Modify the description of inspected object (see Clause 5; Clause 7 of the 2011 edition);
- f) Modify the requirements for test equipment (see Clause 6; Clause 8 of the 2011 edition);

edition);

g) Modify the description of preparation for testing (see Clause 7; Clause 7 of the

2011 edition);

h) Modify the evaluation parameters and procedures; expand the previous normal component or tangential component into a three-dimensional component (see 8.1; Clause 10 of the 2011 edition);

i) Add the acquisition method and value criterion for gradient intermediate value and gradient coefficient threshold (see 8.2 and 8.3);

j) Modify the test record and report (see Clause 9; Clause 11 of the 2011 edition);

k) Modify personnel qualification requirements (see Clause 10; Clause 4 of the 2011 edition).

This document is identical to ISO 24497-1:2020 "Non-destructive testing - Magnetic memory testing - Part 1: Vocabulary and general requirements".

The following minimal editorial change has been made to this document:

- In order to harmonize with the existing standards, change the standard name to "Non-destructive testing - Magnetic memory testing - General requirements".

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. The issuing authority of this document shall not be held responsible for identifying any or all such patent rights.

This document was proposed by and shall be under the jurisdiction of National Technical Committee 56 on Non-destructive Testing of Standardization Administration of China (SAC/TC 56).

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The previous editions of this document and the documents it replaces are as follows:

- It was first issued as GB/T 26641-2011 in 2011. This is the first revision.

Non-destructive testing - Magnetic memory testing -

General requirements

1 Scope

This document specifies terms and definitions for non-destructive testing (NDT) by the technique of metal magnetic memory (MMM) as well as general requirements for application of this technique of the method.

This NDT technique specified in this document has the following objectives:

- determination of the heterogeneity of the magneto-mechanical state of ferromagnetic objects, detection of defect stress concentration and boundaries of metal microstructure heterogeneity;
- determination of locations with magnetic stray field aberrations for further microstructural analysis and/or non-destructive testing and evaluation;
- early diagnostics of fatigue damage of the inspected object and evaluation of its structural life time;
- quick sorting of new and used inspection objects by their magnetic heterogeneity for further testing;
- efficiency improvement of non-destructive testing by combining magnetic memory with other NDT methods or techniques (ultrasonic testing, x-ray, etc.) by fast detection of the most probable defect locations;
- quality control of welded joints of various types and their embodiment (including contact and spot welding). See ISO 24497-2 for details of this application.

2 Normative references

The contents of the following documents, through normative references in this text, constitute indispensable provisions of this document. Among them, for dated references, only the edition corresponding to that date applies to this document. For undated references, the latest edition (including all amendments) applies to this document.

ISO 9712 Non-destructive testing - Qualification and certification of personnel

Note: GB/T 9445-2015 Non-destructive testing - Qualification and certification of NDT personnel (ISO 9712:2012, IDT)

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