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GB/T 9445-2024 / ISO 9712:2021

Replacing GB/T 9445-2015

# Non-destructive testing - Qualification and certification of personnels

无损检测 人员资格鉴定与认证

(ISO 9712:2021, Non-destructive testing - Qualification and certification of NDT personnel, IDT)

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#### **Foreword**

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

This document replaces GB/T 9445-2015 "Non-destructive testing - Qualification and certification of personnels". Compared with GB/T 9445-2015, in addition to structural adjustments and editorial changes, the main technical changes are as follows:

- a) ADD the terms and definitions of applicants, certification cycle, certification process, certification requirements, competence, examination, examination elements, higher education, non-destructive testing personnel, psychological process, referees, structured credit system, structured experience program, work activities (see 3.1, 3.7, 3.8, 3.9, 3.10, 3.12, 3.14, 3.17, 3.26, 3.32, 3.35, 3.43, 3.44, 3.46). CHANGE the terms and definitions of basic examination elements, general examination elements, main method examination elements, practical examination elements, recertification, specimen (see 3.3, 3.16, 3.21, 3.31, 3.34, 3.41; 3.2, 3.10, 3.14, 3.22, 3.35, 3.30 of the 2015 edition);
- b) ADD the requirements for independence, public certification schemes and descriptions, examination center examinations, non-fixed location examinations, certification, training institutions, authorized examiners, supervision, confirmation of higher education experience, referees, structured credit system, age of candidates [see 5.2.2b), d), i), j), l), o), q), r), s), t), u), v), w), x), y)]. CHANGE the requirements for training courses [see 5.2.2e); 5.2.2b of the 2015 edition)];
- c) ADD the approval and supervision of authorized qualifying body and examination centers [see 5.3f), h); 5.3.1 of the 2015 edition];
- d) DELETE some requirements for examination centers [see 5.4.1f of the 2015 edition)];
- e) DELETE the requirements for employers to participate in qualification appraisal examinations (see 5.5.2 of the 2015 edition);
- f) CHANGE the requirements for candidates to apply for examinations (see 5.6; 5.6 of the 2015 edition);
- g) ADD the requirements for examiners (see 5.8);
- h) ADD the requirements for referee (see 5.9);
- i) CHANGE the responsibilities of level 3 personnel authorized by the employer (see 6.3.2; 6.3.2 of the 2015 edition);

## Non-destructive testing - Qualification and certification of personnels

#### 1 Scope

This document specifies the requirements for personnel qualification and certification using the following industrial non-destructive testing (NDT) methods.

- a) Acoustic emission testing;
- b) Eddy current testing;
- c) Leak detection (excluding water pressure testing);
- d) Magnetic particle testing;
- e) Penetrant testing;
- f) Radiographic testing;
- g) Strain testing;
- h) Thermal imaging testing;
- i) Ultrasonic testing;
- j) Visual testing (excluding direct visual testing and visual testing when other nondestructive testing methods are applied).

The system specified in this document can also be applied to other NDT methods or to a new technology that has been defined as a NDT method, provided that a complete certification scheme is established and that the method or technology has been standardized internationally, regionally or nationally, or that the new NDT method or technology has been proven to be effective to the satisfaction of the qualifying body.

- Note 1: The term "industrial" refers to areas of application other than the medical field.
- Note 2: Guidance on methods for qualification of NDT is given in CEN/TR 14748.
- **Note 3**: This document specifies requirements for third-party conformity assessment schemes. These requirements are not directly applicable to first-party or second-party conformity assessment, but reference may also be made to the relevant parts of this document.

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