



Expert commentary

BS EN ISO 9712:2022 — *Non-destructive testing — Qualification and certification of NDT personnel*

Jennifer Cook, Certification Manager, The British Institute of Non-Destructive Testing and John Moody, Senior Technical Engineer, The British Institute of Non-Destructive Testing

1 Overview

BS EN ISO 9712:2022 is the fifth edition of this standard. It technically cancels and replaces the fourth edition – BS EN ISO 9712:2012. BS EN ISO 9712:2022 describes requirements for *Non-destructive testing – Qualification and certification of NDT¹ personnel*.

The effectiveness in the application of non-destructive testing (NDT) depends on the proficiency and integrity of the individual that performs inspections or who is responsible inspections. This standard has been developed to provide methods to evaluate the competence of individuals who need suitable theoretical and practical knowledge of the NDT¹ inspections they perform.

NDT¹ is used across many industries, including but not limited to general engineering/manufacturing, aerospace, nuclear, power generation, oil and gas and rail. Certification of NDT¹ personnel is required across many standards and regulations, there is an increasing requirement of quality assurance that a company's engineers and technicians can demonstrate that they have the required level of knowledge and skill.

BS EN ISO 9712:2020 sets the minimum requirements for employers to assure themselves and industry that the individuals certified to this standard are competent to carry out the NDT tasks they are authorized to conduct.

The level of change incorporated into the revised version of the standard can be described as high. The main changes compared to the previous edition are:

- vision requirements have been expanded and are now in accordance with BS EN ISO 18490:2015
- terms and definitions have been expanded and new terminology included to cover new requirements
- employer requirements are now mandatory, including maintaining records that demonstrate continuity of practice
- there is now a structured credit system for renewal of levels 1, 2 and 3 and for level 3 recertification
- the renewal criteria for levels 1 and 2, includes the requirement to take a practical exam or success meeting the requirements of the structured credit system
- NDT¹ Training is now counted in days, not hours
- industrial experience is now counted in days, not months, and the amount required has reduced
- the use of a Structured Experience Program (referred to as SEP) has been introduced. This is a program approved by the certification body to reduce industrial experience
- examination parts are now referred to as 'elements' and the NDT¹ instruction writing has been separated as its own element
- requirements have been included for certification bodies accepting certificates issued by other certification bodies

1.1 Reasons for change

On its last review, fourth edition – BS EN ISO 9712:2012 was harmonized with BS EN 473:2008, upon the release of BS EN ISO 9712:2012, BS EN 473:2008 was made obsolete. The main technical reason for the revision of BS EN ISO 9712:2012 was to add clarification to the guidance and define the process to be used for the certification of NDT¹ personnel by certification bodies and employers. The revision took into account the growing experience in the use of the standard in a rapidly increasing number of countries worldwide. This is the first revision since BS EN ISO 9712:2012 was harmonized with BS EN 473:2008. In addition, the opportunity was made to tidy up some areas of the document.

1.2 Summary

- revised requirements for the conditions of certification
- inclusion of new term 'referee'
- revised requirements for examinations
- vision requirements have been expanded and are now in accordance with BS EN ISO 18490:2015
- terms and definitions have been expanded and new terminology included to cover new requirements
- there is now a structured credit system for renewal of levels 1, 2 and 3 and for level 3 recertification
- NDT¹ training is now counted in days, not hours
- industrial experience is now counted in days, not months, and the amount required has reduced

- examination parts are now referred to as 'elements' and the NDT¹ instruction writing has been separated as its own element
- Annex A – normative – Product sectors now include composite materials
- Annex B – normative – Table covering minimum number and type of specimens has been replaced by requirements
- Annex C – normative – Structured credit system has been expanded to cover levels 1 and 2
- Annex D – normative – Aligned with the introduction of exam 'elements' and NDT¹ instruction writing
- Annex F – informative – Introduction of training requirements for techniques
- Annex G – informative – Introduction of psychometric principles
- Annex ZA – Updated to align with the essential requirements of EU directive 2014/68/EU

2 Main commentary

The standard has evolved in terms of recognizing the importance of conformity assessment, in particular, impartiality.

BS ISO/CASCO⁴ – which is the BS ISO committee that works on issues relating to conformity assessment – has defined requirements to align BS EN ISO 9712:2022 with BS EN ISO/IEC 17024:2012, *Conformity assessment — General requirements for bodies operating certification of persons*.

There have been a number of refinements to the requirements of the certification body and conditions of certification. The changes are not likely to be significant for CBs² already accredited to BS EN ISO/IEC 17024:2012.

2.1 Subclause 5.5 employer

Users of this standard should be aware of the employer requirements and understand the changes that have been introduced.

The standard now mandates that the employer's responsibilities are described in a documented procedure, this was only a recommendation in the fourth edition of BS EN ISO 9712:2012.

If the employer does not meet these mandated responsibilities, they should consider whether what they are offering is compliant BS EN ISO 9712:2012 certification, and that there could be legal/contractual implications if this is not the case.

2.2 Subclause 7.2 training

The standard now allows the CB² to accept alternative methods of theoretical training including face-to-face instructor-led, distance learning and self-paced. The practical training on the other hand must still be delivered in a face-to-face instructor-led format.

The standard now prescribes a time limit for the validity of training for initial certification, a maximum of 10 years from the date of completion. This limit has not been applied in previous editions.

2.3 Subclause 7.2.4 minimum training requirements

Table 2 prescribes the minimum training requirements, following is a comparison.

This may increase the time that an individual is required to attend a training course, depending on how the training is delivered.