AS ISO 20807:2020

Non-destructive testing — Qualification of personnel for limited application of non-destructive testing

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The following are represented on Committee MT-007:

Australasian Thermographers Association
Australian Institute for Non-Destructive Testing
Australian Nuclear Science and Technology Organisation
Austroads
Engineers Australia
Institute of Electrical Inspectors
National Aerospace Non-Destructive Testing Board of Australia
Weld Australia

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Australian STANDARD®

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Preface

This Standard was prepared by the Australian members of the Joint Standards Australia/Standards New Zealand Committee MT-007, Non-Destructive Testing of Metals and Materials.

After consultation with stakeholders in both countries, Standards Australia and Standards New Zealand decided to develop this Standard as an Australian Standard rather than an Australian/New Zealand Standard.

The objective of this Standard is to establish a system for the qualification of personnel who perform NDT applications of a limited, repetitive or automated nature, such as —

(a) eddy current and electromagnetic sorting of materials;

(b) eddy current and electromagnetic testing of tubular products during manufacture;

(c) normal beam ultrasonic testing of plate materials during manufacture; and

(d) ultrasonic thickness testing.

The above examples are not intended to restrict the range of qualifications which could be covered by this Standard.

This Standard therefore does not provide for magnetic particle testing (MT) or liquid penetrant testing (PT).

NOTE The arrangements described in AS ISO 9712 provide sufficient flexibility to allow limited applications of these methods.

When the need for qualified non-destructive testing (NDT) personnel is defined in product standards, regulations, codes or specifications, and the nature of the testing to be carried out is limited in scope or automated such that the qualification requirements specified in AS ISO 9712 are considered inappropriate or excessive, it may be satisfied by qualification in accordance with this Standard.

This Standard is not intended to supplant the qualification and certification requirements detailed in sector-specific standards.

The requirements detailed in this Standard apply only to NDT personnel qualified for specific applications, and no direct attempt should be made to equate this to the NDT levels defined in AS ISO 9712.

This Standard is identical with and has been reproduced from, ISO 20807:2004, *Non-destructive testing — Qualification of personnel for limited application of non-destructive testing*.

As this document has been reproduced from an International Standard, the following applies:

(i) In the source text "this International Standard" should read "this Australian Standard".

(ii) A full point substitutes for a comma when referring to a decimal marker.

Australian or Australian/New Zealand Standards that are identical adoptions of international normative references may be used interchangeably. Refer to the online catalogue for information on specific Standards.

The terms "normative" and "informative" are used in Standards to define the application of the appendices or annexes to which they apply. A "normative" appendix or annex is an integral part of a Standard, whereas an "informative" appendix or annex is only for information and guidance.

Contents

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

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

ISO 20807 was prepared by Technical Committee ISO/TC 135, *Non-destructive testing*, Subcommittee SC 7, *Personnel qualification.*

Introduction

Since the effectiveness of any application of non-destructive testing depends upon the capabilities of the persons who perform or who are responsible for the test, a procedure has been developed to provide a means for evaluating and documenting the competence of personnel whose duties require the appropriate theoretical knowledge and practical competence of the non-destructive tests that they perform.

For this reason, ISO/TC 135 developed an International Standard, ISO 9712, to ensure that the certification of competence of NDT personnel could be performed to a consistent and high standard worldwide.

Recognizing, however, that the provisions of ISO 9712 were not necessarily appropriate in some instances, e.g., in limited applications of non-destructive testing, ISO TC135 SC 7 authorized a Working Group (WG 5) to draft proposals which would facilitate the standardization of the qualification of personnel carrying out such limited NDT applications. This document represents the result of the deliberations of ISO/TC 135/SC 7/WG 5.

As a provision outside the scope of ISO 9712 requirements, limited NDT is the practice of a test method for a particular application requiring specific training and experience, i.e., an application which is limited, repetitive or automated. It should be noted that, within ISO 9712, there is provision for a reduction in the duration of training and experience required for eligibility. Annex A serves to provide examples of syllabi for the training and examination of personnel seeking qualification to this International Standard.

The methodology set out in this International Standard may be applied to the qualification of personnel for any limited application of NDT. However, it is not intended that qualification for limited applications be substituted for qualification and certification under ISO 9712.

NOTE Wherever gender-specific words such as "his", "her", "he" or "she" appear in this International Standard the other gender is also applicable.

NOTES

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1 Scope

1.1 This International Standard establishes a system for the qualification of personnel who perform NDT applications of a limited, repetitive or automated nature, such as:

a) eddy current and electromagnetic sorting of materials;

b) eddy current and electromagnetic testing of tubular products during manufacture;

c) normal beam ultrasonic testing of plate materials during manufacture;

d) ultrasonic thickness testing.

These examples are not intended to restrict the range of qualifications which could be covered by this International Standard.

1.2 This standard therefore does not provide for magnetic particle testing (MT) or liquid penetrant testing (PT).

NOTE The arrangements described in ISO 9712 provide sufficient flexibility to allow limited applications of these methods.

1.3 When the need for qualified non-destructive testing (NDT) personnel is defined in product standards, regulations, codes or specifications, and the nature of the testing to be carried out is limited in scope or automated such that the qualification requirements specified in ISO 9712 are considered inappropriate or excessive, it may be satisfied by qualification in accordance with this International Standard.

1.4 This International Standard is not intended to supplant the qualification and certification requirements detailed in sector-specific standards, such as ISO 11484:1994 *Steel tubes for pressure purposes — Qualification and certification of non-destructive testing (NDT) personnel*.

1.5 The requirements detailed herein apply only to NDT personnel qualified for specific applications, and no direct attempt should be made to equate this to the NDT levels defined in ISO 9712. However, it is recommended that qualified personnel defined in this International Standard be supervised by an appropriately certified NDT level 2 or 3 person as defined in ISO 9712:1999.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 9712:1999, *Non-destructive testing — Qualification and certification of personnel*

ISO/IEC 17024, *Conformity assessment — General requirements for bodies operating certification of persons*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.