

FED. SUPPLY CLASS

NAS CERTIFICATION & QUALIFICATION OF NONDESTRUCTIVE TEST PERSONNEL

AMENDMENT

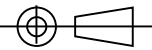
STANDARD PRACTICE

AEROSPACE INDUSTRIES ASSOCIATION OF AMERICA, INC.
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REVISION DATE:

REVISION DATE: OCTOBER 30, 2020

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THIRD ANGLE PROJECTION 	CUSTODIAN QUALITY ASSURANCE COMMITTEE	REVISION 5 AMENDMENT
PROCUREMENT SPECIFICATION NONE	TITLE NAS CERTIFICATION & QUALIFICATION OF NONDESTRUCTIVE TEST PERSONNEL	CLASSIFICATION STANDARD PRACTICE NAS410 SHEET 1 OF 2



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This document contains changes that were approved by the AIA Nondestructive Testing Subcommittee (NDTSC) and Quality Assurance Committee (QAC) on October 26, 2020. These changes facilitate production during the COVID-19 pandemic restrictions in place by global government agencies and are intended to be transitory during this period. These changes may be immediately implemented upon release and will be valid until such time that this amendment is withdrawn. Revision of the employer's written practice per section 4.1 to incorporate these changes is not required.

New Section added after 8.3.1:

8.3.1.1 EXTENSIONS

Employers affected by government and company restrictions in place due to the COVID-19 pandemic may grant a one-time extension up to 90-days from the expiration date for certification, annual maintenance, and vision examinations. Each extension must be documented with new expiration date, justification, and approval by the Responsible Level 3 or Examiner. Extensions may only be applied due to government and company restrictions in place due to COVID-19 pandemic.

Added the following list item in 8.2.1:

8.2.1 MINIMUM REQUIREMENTS

I. When extensions are applied per 8.3.1.1: new expiration date, justification, and approval by the Responsible Level 3 or designated Examiner for each extension applied.

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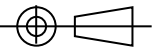
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THIRD ANGLE PROJECTION		CUSTODIAN QUALITY ASSURANCE COMMITTEE	REVISION 5
PROCUREMENT SPECIFICATION NONE	TITLE NAS CERTIFICATION & QUALIFICATION OF NONDESTRUCTIVE TEST PERSONNEL	CLASSIFICATION STANDARD PRACTICE	NAS410 SHEET 1 OF 29



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1. SCOPE

1.1 PURPOSE

This document establishes the minimum requirements for the qualification and certification of personnel performing non-destructive testing (NDT), nondestructive inspection (NDI), or nondestructive evaluation (NDE) in the aerospace manufacturing, service, maintenance and overhaul industries. For the purposes of this document, the term NDT will be used and will be considered equivalent to NDI and NDE.

In Europe, the term "approval" is used to denote a written statement by an employer that an individual has met specific requirements and has operating approval. The term "certification" as defined in 3.2 is used throughout this standard as a substitute for the term "approval". Except when otherwise specified in the written practice, certification in accordance with this standard includes operating approval.

1.2 APPLICABILITY

This standard applies to personnel using NDT methods to test and/or accept materials, products, components, assemblies or sub-assemblies. This standard also applies to personnel: directly responsible for the technical adequacy of the NDT methods used, who approve NDT procedures and/or work instructions, who audit NDT facilities, or who provide technical NDT support or training.

This standard does not apply to individuals who only have administrative or supervisory authority over NDT personnel or to research personnel developing NDT technology for subsequent implementation and approval by a certified Level 3. Personnel performing specialized inspections using certain direct readout instruments as determined by a Level 3 certified in the method, do not require qualification or certification to this standard.

1.2.1 IMPLEMENTATION

This standard addresses the use of a National Aerospace NDT Board (NANDTB). NANDTBs are only used as specified per Annex C and it is not mandatory to have such a board for compliance with this document. Personnel certified to previous revisions of NAS410 or EN 4179 need not recertify to the requirements of this standard until their current certification expires.

1.3 METHODS

1.3.1 COMMON METHODS

This standard contains detailed requirements for the following common NDT methods:

Eddy Current Testing	(ET)
Liquid Penetrant Testing	(PT)
Magnetic Particle Testing	(MT)
Radiographic Testing	(RT)
Thermographic Testing	(IRT)
Ultrasonic Testing	(UT)

1.3.2 OTHER METHODS

When invoked by engineering, quality, cognizant engineering organization or prime contractor requirements, this standard applies to other current and emerging NDT methods used to determine the acceptability or suitability for intended service of a material, part, component, sub-assembly or assembly. Such methods may include, but are not limited to, acoustic emission, neutron radiography, leak testing, holography, and shearography. The requirements for personnel training, experience, and examination for these other methods shall be established in accordance with 6.4 and shall be documented by the employer.

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2. NORMATIVE REFERENCES

2.1 STANDARDS

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.

EN 4179, Aerospace Series - Qualification and Approval of Personnel for Nondestructive Testing

ISO 9712, Non-destructive Testing - Qualification and Certification of NDT Personnel

ISO 18490, Non-destructive Testing – Evaluation of Vision Acuity of NDT Personnel

2.2 ORDER OF PRECEDENCE

In the event of a conflict between the text of this document and the references cited herein, the requirements of this document take precedence. Nothing in this document supersedes applicable laws and regulations unless a specific exemption has been obtained.

3. TERMS AND DEFINITIONS

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

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at <https://www.iso.org/obp>

— IEC Electropedia: available at <http://www.electropedia.org/>

3.1 BASIC EXAMINATION

An examination utilized to verify a Level 3 candidate's knowledge of NDT methods used by the employer at a Level 2 proficiency.

3.2 CERTIFICATION

A written statement by an employer that an individual has met the applicable requirements of this standard.

3.3 CLOSED BOOK EXAMINATION

An examination administered without access to any reference materials.

3.4 COGNIZANT ENGINEERING ORGANIZATION

The engineering or NDT organization of the prime contractor, OEM (Original Equipment Manufacturer), or end user authorized to make NDT-related decisions and give NDT-related approvals.

3.5 COMMITTEE OR PANEL MEETINGS

Meetings, conferences, symposia, seminars, trade association meetings, panels, etc. organized or sponsored by a regional, national or international NDT organization or technical society. Foreign or international meetings qualify if the sponsor(s) are national or international.

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3.6 COMMITTEE PROJECTS

Specific identifiable official activities of regional or national technical societies, committees or work groups, such as round robins or individual studies, preparation of guidelines, appendices, specifications, recommended practices, procedures, codes or standards, etc. Documentation may include memos or reports, drafts of committee output documents, or official written comments submitted by the candidate on such documents.

3.7 DIRECT OBSERVATION

When the observer is able to view the NDT process in a manner that permits uninterrupted, visual and verbal two-way contact with the trainee.

3.8 DIRECT READOUT INSTRUMENT

Instruments that physically display measurements in dimensional or electrical units (e.g. inches, millimeters or %IACS) either as digital readout or an analog display, such as a scale/pointer configuration, and do not require special skills or knowledge to set up the instrument and do not involve adjusting signal displays such as gates, delays, gain, or phase to obtain measurements. For example, common direct readout instruments include basic ultrasonic thickness gauges without an oscilloscope display, and eddy current coating thickness gauges.

3.9 DOCUMENTED

The condition of being recorded in written or electronic form.

3.10 EMPLOYER

An organization employing or contracting the services of one or more individuals who perform NDT. Self-employed individuals are included in this definition.

3.11 EVALUATION

A review following interpretation of the indications noted during an NDT inspection to determine whether the indications meet specified acceptance criteria or to determine the significance of the indication.

3.12 EXAMINATION

Formal, controlled, documented testing conducted in accordance with a documented written practice to verify a candidate's visual capability, skill or knowledge of an NDT method.

3.13 EXAMINER

A Level 3 certified to this standard and designated by the Responsible Level 3 to administer all or part of the qualification process in the NDT method(s) in which the Examiner is certified.

3.14 EXPERIENCE

Actual performance of an NDT method conducted in the work environment resulting in the acquisition of knowledge and skill. This does not include formal classroom training, but may include laboratory and on-the-job training as defined by the employer's written practice.

3.15 FORMAL EDUCATION

Engineering or science studies at a technical school, college, or university.

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