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Responsible Level 3 duties and authorities per NAS 410

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How do we bridge the Gap between Tribal knowledge and Documented Written Knowledge

Problem: Level IIIs are retiring and taking “knowledge” with them. This course will engage with the student to help them improve and often develop NDT programs where no NDT programs exist

1. Presentation Purpose: To define and teach the following:

- a. Requirements, responsibilities and authority when becoming the Designated Company / Responsible Level III
- b. Understanding & Developing the Written Practice to meet Qualification Documents for NAS 410
- c. Qualifying, Certifying, Level III surveillance for technical performance evaluations and Recertifying NDT Level I and II personnel



Section 1



Certification Program Comparison

Certification Programs

- NAS 410 – AIA National Aerospace Standard
Aerospace Industries Association

SNT-TC-1A – ASNT Recommended Practice
& CP 189 – ANSI / ASNT Standard

(These 2 documents will not be covered)

NAS 410

Certification Programs

This standard establishes the minimum requirements for the qualification and certification of personnel performing NDT in aerospace. The written practice shall be approved by the Responsible Level 3 and **The Employer shall establish:**

- The levels of qualification and certification used by the employer
- Personnel duties and responsibilities
- Training and experience requirements
- Certification and recertification requirements
- Records and record keeping requirements
- Requirements for expiration, suspension, revocation and reinstatement of certifications
- Processing (inspections) for annual maintenance

Section 2



What are the minimum Level III
qualification requirements?

Level III Eligibility Requirements

NAS 410

- 3-4 year science or engineering degree: 1 year Level II experience
- 2 years of engineering or science study at a tech. school, college or university with 2 years Certified Level II experience
- 4 yrs. of Certified Level II experience

Individuals cannot certify to Level 3 without prior certification to Level 2 Certification in the method

Level III Qualification Requirements

Company Level III – **NAS 410**

General Exam – plus questions on additional Methods

Specific Exam – Required

Procedure Exam – Required

Practical Exam – Required if inspecting product

ASNT Level III – **NAS 410**

ASNT Basic Exam

ASNT Method Exam

The ASNT cert covers the General

Specific Exam – Required

Procedure Exam – Required

Practical Exam – Required if inspecting product

Section 3



What defines the Company,
Principle or Responsible Level III?

The Exhausted

LEVEL III



The Level III we aspire to BE !!



The Designated Company Level III

Company, Principle or Responsible Level III – Terms are Synonymous

The Level III is given responsibilities to enforce the Written Practice – May supervise other company Level IIIs – A company employee or Outside Agency

The only Level III in the company – A company employee

Outside Agency / Independent Consultant – A one person company performing duties as an Outside Agency for one company or several companies

Responsible Level 3: Excerpt from NAS 410

4.3.2 RESPONSIBLE LEVEL 3

The employer shall identify in writing a "Responsible Level 3" to act on its behalf in matters regarding the NDT qualification and certification process. The Responsible Level 3 shall be certified in accordance with this standard as a Level 3 in one or more NDT methods and shall have a thorough knowledge of the written instructions, codes, specifications and standards used by the employer. He/she shall also have a thorough knowledge of the materials, components, product technologies, NDT methods and NDT techniques used by the employer. Additional Examiners as defined in this standard may be identified and delegated in writing as necessary to provide coverage for all methods used by the employer. The Responsible Level 3 may be an outside agency but in this case he/she can only qualify personnel, as only the employer can certify personnel. The Responsible Level 3 shall be responsible for implementation of this standard and the overall administration of the qualification and certification program.

Section 4



Developing the Written Practice

Employer's Written Practice: Excerpt from NAS 410

4.3.1 GENERAL

The employer is responsible for the implementation of, and compliance with, this standard and for certifying qualified personnel. In addition, the prime contractor shall be responsible for compliance to this standard by their sub-contractors. Employers using outside agencies shall be responsible for assuring that the appropriate requirements of this standard are met. The employer is solely responsible for the certification of its employees and cannot certify for another employer. Individuals cannot qualify themselves. Self-employed individuals may certify themselves provided they have a written practice and have been qualified to the requirements of this standard by another individual certified to Level 3 in accordance with this standard.

Qualifying & Certifying Personnel to meet NAS 410

To order the standard, visit the website <https://global.ihs.com/>



Sample Written Practice for NAS 410

Basic Requirements

- Scope
- Reference Documents
- Levels Of Qualification And Responsibilities
- Formal Training and Experience
- Examinations: Gen, Spec, Prac, Proc
- Record Keeping
- Annual Review / Maintenance
- Certification, Recertification, Loss of Certification

Quality Control Requirements

- Tables: Experience hours, Training hours, Point System
- Forms: Training, Vision Exam, Certification, OJT, Work History
- Course Outlines – ASNT CP-105 is a Guide Approved by the Level 3
- Required Reading for Level 1 and 2 Personnel, if applicable

Initially Qualifying NDT Personnel

- Provide Classroom / Formal NDT Training
 - Formal training prior to or in conjunction with OJT experience
 - Classroom/ Instructor Led , Self Study, Computer based, Webinar
- Document NDT Experience – in writing
 - By the date, hour and task. Shall be signed or stamped by a Level II or III certified in the method
- Document NDT examinations for each method
 - Only by an NAS 410 Level 3, certified in the NDT method.
- Visual Acuity: Near Vision and Color Perception

NDT Trainee Qualification Experience (OJT) log

Trainee Name: Jane Doe Qualification Level: II

NDT Method: Radiography – Non-Film Month/Total: Sept – 13 hrs.

Total required = 1000 hrs.

DATE	# OF OJT HOURS	JOB TASK	Signature Of Trainer	Trainer Certification Level
9/25/2015	7	CR – Composites	John Doe	II
10/11/2015	6	DDA – Castings	Toni Boulogne	III

- 1. Training hours shall be signed or stamped by a Level II or III certified in the method
- 2. Trainer shall be a Company Employee unless otherwise approved by RL3

Initially Certifying NDT Personnel

- Use approved / controlled company forms to document qualifications
- The form may be one document or an individual document for each method of certification, may include Work History and Vision exam results

Certification record at a minimum, must include:

- The Name of the individual and Company Name
- The individual is certified to meet the Written Practice & the Document
- Level of certification, Exam scores, Composite Score for each method
- Date of Issue, Date of Expiration
- Level III Signature and Certification Authority (may be the same person)

Example: Certification Documentation

Name: Jane Doe

Employer: ABC Corp

The individual named above has met the education, training, experience and examination requirements in accordance with the current revision of the (Company) Written Practice for the Qualification and Certification of Personnel (Number i.e. WP-00) and is certified in the Nondestructive Test method(s) listed below:

Reference Accompanied Certification Letter for each Method (NAS 410)

Method of Certification	Level of Certification	Date of Issue	Date of Expiration
Radiography - Gamma	II	1/16/2013	1/31/2018

NDT Method	General	Specific	Practical	COMPOSITE
Radiography	75	84	90	83

Signed by: the Responsible Level III and the Certification Authority

Section 5

NDT Quality Assurance Program Internal Auditor Requirements Audit Intervals & Audit Checklists



NDT Quality Assurance

The Level III or Quality Manager shall ensure:

- A Quality Program must exist and NDT is included in the program

ISO 9000 or AS 9100 are examples

- An approved Quality Manual and a section for NDT requirements must exist

Requirements for NDT Quality, who manages the program, Qualified NDT Auditors, NDT Auditor Training and Audit checklists & audit intervals

Calibration and Equipment Repairs are accomplished and records kept

NDT Quality Assurance

Requirements for NDT Quality: IAW ASTM

E 543 – Standard Spec for Agencies performing NDT

E1212 – Standard Practice for Quality Management for NDT

E1359 – Standard Guide for Auditing and Eval Capabilities for NDT

Who manages the program: The Quality Manager

Who are Qualified NDT Auditors: NDT Level III or Level II minimum

NDT Auditor Training: Minimum of 16 hour course recommended

NDT Quality Assurance

NDT Auditor Certification: Conduct 2 audits minimum with another auditor and final exam audit. Obtain an Internal Auditor Certification

Audit checklists: Developed per NAS 410 & ASTM for Periodic Monitoring of NDT inspections, equipment, materials, and procedures

Audit intervals: Every 6 months or Annual

Internal Audits: are performed by your auditors in your facilities

External Audits: outside NDT Vendors performing work for your company ensuring your company Procedures and Customer requirements are met

Level 3 Authority: Loss of NDT Certification

- **Expiration:** Certification, annual maint., vision examinations have lapsed
- **Suspension:**
 - Vision examination is expired.
 - Individual does not perform the method
 - Individual fails recertification examination.
 - Individual's performance is found to be deficient in any manner.
 - Annual maintenance
- **Revoked:**
 - Individual does not perform the certified method for the employer
 - When employment has been terminated
 - Individual's conduct is found to be unethical or incompetent

Level 3 Authority:

Suspending & Revoking Company NDT Programs

- **Expiration:** NDT Audits or compliances go overdue or have lapsed
- **Suspension:**
 - NDT certifications or company accreditations are expired.
 - Company has halted performance of NDT in the method
 - Company and/or management's performance is found to be deficient in any manner.
- **Revoked:**
 - Company fails NDT Audits and do not take steps toward corrective actions
 - Company and/or management's conduct are found to be unethical or incompetent

Level III Authority:

- The NDT Program is your responsibility
- You truly have the POWER!



In conclusion:

- a. Be ethical, do the right thing, don't let the company bully you
- b. Take good care of yourselves and find serenity in your endeavors



Questions and Answers Segment

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