

Auditors Qualification

Interpretation CZ NANDTB No: 2/2016

Version 2: December 5, 2022, Jiří Hezoučský (GE Aviation CZ RL3) & Václav Jandura (Honeywell & P&W PT L3),
CZ NANDTB members

Version 1 (Original): Prague, June 14, 2016, Zbynek Zavadil, CZ NANDTB Secretary

Released: December 9, 2022, Zbynek Zavadil, CZ NANDTB Secretary

1. Preamble

- 1.1 Standards NAS410:2020 and EN4179:2021 and Nadcap AC7114 questionnaire list requirements for auditor qualification in very simplistic form.
- 1.2 Interpretation of these new requirements is not given. Auditor requirements implemented in individual companies differ significantly and led to significant drop of auditor competency.

2. Citation from the standard

2.1 EN 4179:2021, par. 5.1.7 Auditor

a) Personnel performing technical NDT audits, surveys or assessments shall have the training, skills and knowledge to understand the processes and procedures utilized in the application of NDT processes.

b) The individual shall be familiar with the applicable codes, standards, and other contractual documents that control the applicable test method(s).

2.2 Nadcap AC 7114, Rev. R, par. 4.3.3

Is there evidence that the auditee has defined the requirements for personnel performing technical NDT audits, surveys, or assessments (internal and external) to have the training, skills, and knowledge in the applicable method(s)?

Guidance: This requirement shall be addressed in the Auditee written practice either in detail or by reference to another procedure in the written practice.

2.3 Pratt & Whitney NDTQ rev. V, par. 11.4 Approval of P&W NDT Auditors

...

- NDT Auditors must possess, at a minimum, P&W Level 3 certification in at least two
- NDT methods, one of which must be a Category 1 method.
- Auditors shall also have NDT responsibilities (Methods, Over-inspections, Investigations, Certifications) as part of their routine job function.
- They shall also pass a practical examination consisting of two audits, accompanied
- by a qualified NDT auditor.
- The Certifying Agency shall determine training content, time required and shall issue
- qualification examinations.

...

2.4 Honeywell SI-165-01, rev. AB, par. 6.4

QUALIFICATION AND APPROVAL OF NDT AUDITORS: Personnel performing NDT systems and product audits, surveys or assessments shall be approved by the employer's Responsible Level 3. They shall have documented NDT (equivalent to Level 2) and Auditor (8 hours minimum) training and shall pass general and specific examinations covering the applicable NDT methods and audit

requirements. They shall also pass a practical examination consisting of two audits, accompanied by a qualified auditor. Qualified auditors from an outside agency may be used by the employer when approved by the employer's Responsible Level 3 and documented evidence of qualification is maintained on file and made available for review by Honeywell when requested.

3. Terminology

3.1 Knowledge

General information about the NDT method(s) necessary to understand the processes and procedures utilized in the application of NDT processes for auditing purposes.

3.2 Training

Organized and documented program of activities designed to impart the skills and knowledge required to understand the processes and procedures utilized in the application of NDT processes.

3.3 Skill

Ability to implement general knowledge about the processes and procedures utilized in the application of NDT processes for auditing purposes.

4. Justification

- 4.1 Audits provide tool for verification of conformity with requirements derived from law, contracts, agreements with customer and internal processes.
- 4.2 In order to make the auditing effective, the auditor needs to understand the auditing process conceptually, understand in detail requirements derived from 4.1, and have sufficient understanding of processes that may affect those requirements in its technical aspects.
- 4.3 Requirements for auditors qualification, as defined by the EN4179 / NAS410 standard, does not provide sufficient guidance how to ensure competency of the auditors for auditing tasks in NDT. For that reason Nadcap AC7114 (see 2.2 above) and many prime producers (see 2.3 and 2.4 above) request more robust assessment of the auditors qualification. Such assessment is able to ensure that auditors know how to audit, understand the process and have relevant experience.
- 4.4 This Interpretation aims to set a benchmark for correct auditor qualification based on template approach of selected prime producers.

5. Interpretation of CZ NANDTB

General requirements

- 5.1 Requirements for qualifications and competence of auditors must be described in Employer's Written Practice, respect Customer's specific requirements, and, where appropriate, further elaborated in employer's implementing documents. The requirements shall address at least the following:
 - 5.1.1 Qualification in auditing process -> theoretical knowledge how to perform audits
 - 5.1.2 Qualification in NDT process -> understanding of the NDT process
 - 5.1.3 Qualification in legislation -> understanding of the specific NDT requirements
 - 5.1.4 Qualification in performing audits -> practical ability to execute NDT audits
- 5.2 Auditor shall be approved and delegated in writing by Employer's Responsible Level 3.

Requirements for auditor qualification

- 5.3 Qualification in auditing process (knowledge and skills related to execution of audits)
 - 5.3.1 Training to acquire knowledge and skills how to perform the audits in terms of their organization, execution, documenting, reporting, etc.
 - 5.3.2 Confirmation of attendance (completion) of at least 8 hours long general training in the field of quality assurance is considered as satisfactory. This may include training related to AS9100 / EN9100, and where relevant also the AC7004.
 - 5.3.3 Training related to ISO 9001, EN ISO 19011, etc. may be considered as acceptable if accepted by Employer's Written Practice.
- 5.4 Qualification in NDT process (knowledge related to NDT process performance)
 - 5.4.1 Training to acquire knowledge of processes established for individual NDT methods implemented by the Employer.
 - 5.4.2 Documented NDT training (equivalent to Level 2) according to the requirements of EN4179/NAS410 for each relevant method in which the audit is carried out is considered satisfactory. Examination is not required for this NDT training.
 - 5.4.3 Documented Level 2 qualification according to EN ISO 9712 for relevant method and subsequent additional training in area of specific requirements in aviation is considered as an alternative fulfillment of this requirement, if accepted by Employer's Written Practice.
- 5.5 Qualifications in legislation (knowledge of customer standards, codes, regulations and specifications)
 - 5.5.1 Auditor must demonstrate familiarity with customer standards, codes, regulations and specifications and with employer's internal documentation (procedures, instructions, implementing regulations, etc.) in relevant area of assessment.
 - 5.5.2 Training relevant to the Employer's production / maintenance portfolio in an extent and content as defined by the Responsible Level 3, but not less than 4 hours per method.
 - 5.5.3 This part may be waived based on decision of the Responsible Level 3 if the auditor completed training acc. to 5.4.3 acc. to the Employer's Written Practice.
- 5.6 Documented experience from at least two audits performed under supervision of a qualified auditor.
 - 5.6.1 Audit reports with documented participation of the candidate and qualified auditor are considered as satisfactory.

6. Interpretation of ANDTBF on auditor's impartiality

Note: This interpretation is based on the decision from the ANDTBF meeting from Munich dated June 15, 2016. Questions/problems presented by EASA representative were interpreted at the meeting.

- 6.1 Audits in NDT processes can be performed by the Employer's Responsible Level 3, despite the fact he is not independent of the audits system. ANDTBF does not consider this as a conflict of interest.
 - 6.1.1 The established quality system of the Employer supersedes the clause 6.1 if relevant.