

NDTSS ADMINISTRATION FOR SINGAPORE NATIONAL AEROSPACE NDT BOARD

Operation of Schemes, Certification Administration

Presented by Sajeesh K BABU
President– Non- Destructive Testing Society (Singapore)

Chairman – International Committee for Non- Destructive
Testing, Vienna



SNANDT Board roles

- Provide a mechanism for interpretation, adjudication and arbitration in cases of dispute regarding the implementation of certification standards
- Maintain an overview of the approval of outside agencies and validation of training courses
- Consider and make recommendations on the acceptance of third party certification as meeting the qualification criteria of EN 4179/NAS 410



SNANDT Board roles

- External liaison, with:
 - other EU National Aerospace NDT Boards,
 - North American organisations having similar aims, and
 - any other pertinent body
- to minimize duplication and multiple audit

NATIONAL AEROSPACE NDT BOARD (NANDTB)

An independent aerospace organization representing a nation's aerospace industry that is chartered by the participating prime contractors and recognized by the nation's regulatory agencies to provide or support NDT qualification and/or examination services in accordance with 4.4.2 of this standard.



What the standard expect from SNANDTB

The Responsible Level 3 may use an NANDTB to:

- Develop training course outlines and training material
- • Create examination questions and administer examinations
- • Approve outside and/or internal organizations providing training and/or examination services
- • Define requirements for qualification of NDT personnel in emerging NDT methods
- Retain written and practical examinations
- Designate Examiners and/or instructors at outside or internal organizations providing training and examination services

Where an NANDTB is used to provide such services, it shall develop processes and procedures that shall ensure full compliance with the requirements of this standard. The activities, processes, procedures, technique catalogs, etc. undertaken/developed by an NANDTB shall be made available for review by prime contractors and regulatory agencies. For countries where no NANDTB exists, the services of other NANDTB's may be used, but are not required to do so, unless specified by local or regulatory requirements.



NDTSS support for SNANDTB

- The NDT Society will assist in forming committees and working groups for the scheme management (EN 4179), Such members would also invited to the ISO 9712 scheme committee as well for supporting Industry sector-aerospace.
- NDTSS will provide audit , approval recommendation service
- NDTSS recommends Outside Agency and Internal Agency after the audit, SNANDTB provides approval
- NDTSS administers, prepare the certificate and issue to relevant parties
- NDTSS updates the database or spread sheet



NDTSS – Operations Manual

Non-Destructive Testing Society (Singapore)



Non-Destructive Testing Society (Singapore)



Quality Assurance Documents

Operations Manual – SNANDTB
Qualification & Certification of NDT Personnel engaged in Aerospace Industries

Prepared By:	Jayesh Bhatt Chairman-Certification	Date: 14.01.2017
Reviewed By:	Grace Liang Chairman - SNANDTB	Date: 14.01.2017
Approved By:	Sajeesh Kumar BABU President NDTSS / Head CB	Date: 14.01.2017

Issued to		
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Revision Summary

Rev.	Description	Date
1	Totally Revised including updated Board Requirements	14.01.2017
0	Initial Issue	15.03.2012

Quality Assurance Documents

SCHEME MANUAL EN 4179 -SNANDTB
Qualification & Certification of NDT Personnel engaged in Aerospace Industries

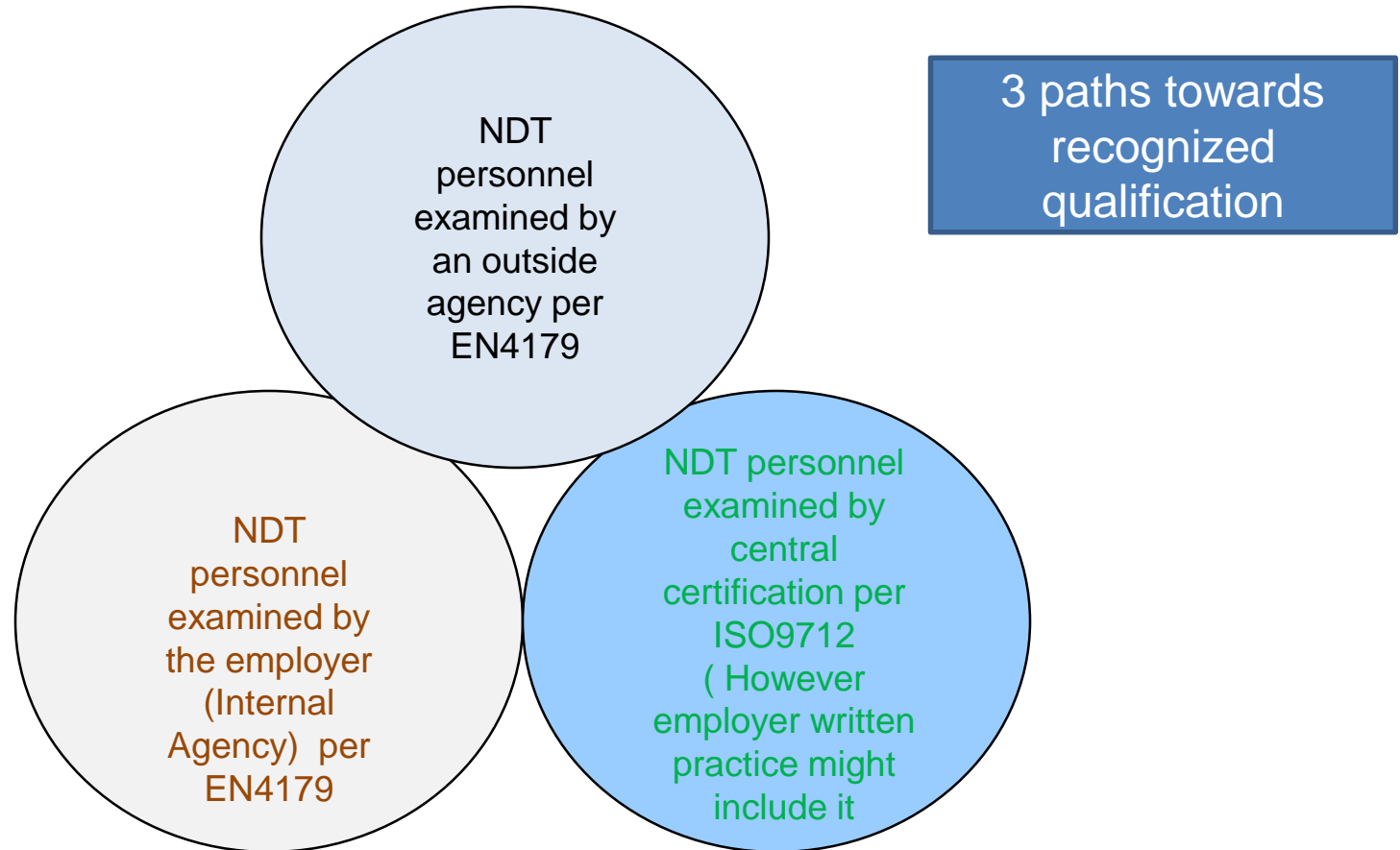
Prepared By:	Jayesh Bhatt Chairman-Certification	Date: 14.01.2017
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Approved By:	Sajeesh Kumar BABU President NDTSS / Head CB	Date: 14.01.2017

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Mechanisms for NDT Examination



EN4179: Outside Agency Approval

- Application for the OA Approval
- Quality Manual, Procedures, Organization chart, List of trainers, List of Examiners, Qualification records, Specimen list (control of specimens), Training material, Examination material (Specific questions), Training facilities, Drafting of Training plan, Drafting of written practice
- Review of Application – 1 Month
- Appointment of Auditor by NDTSS (from the pool)
- Initial Audit – 1.5 Man day for Less than 5 Examination/Training personnel, 2 Man day for 5 and above personnel



OA and IA provides both training and exams services

SNANDTB could issue OA approval to only exam or training services as required in their scope of services

EN 4179: Outside Agency Approval

- Audit Report
- 1 month from Audit to close actions
- Prepare Audit recommendation to SNANDTB for approval
- Maximum 1 month for OA approval (By E-ballot)

- Records
- All Examination records shall be kept by OA
- Applications & recommendations to be send to Certification body (NDTSS)
- Unique Certificate issued by NDTSS with 5 years validity



EN4179 Outside Agency Approval

- NDTSS Provides set of General Examination Questions
- NDTSS Audits set of Specific Examination Questions developed by OA
- NDTSS expect OA to contribute for the set of specific Examination Questions for Aero sector



Sample OA Certificate

Non-destructive Testing Society (Singapore)
Singapore National Aerospace NDT Board

Herewith NDTSS authorizes the OUTSIDE AGENCY

Certificate Number SA.....

“Name of NDT Agency”

Has been audited by the NDTSS & approved by the scheme committee SNANDTB and found to provide the specified services in accordance with EN 4179:2008 & NDTSS Operation Manual

Qualification of NDT Personnel in accordance with EN4179:2008

For the following scope

Method	Specific Scope	Level
Penetrant Testing	Line system & Portable	1, 2, 3
Magnetic Particle Testing	Fixed & Portable	1, 2, 3
Ultrasonic Testing	Manual, Phased Array	1, 2, 3
Radiographic Testing	X-ray, CR, DR	1, 2, 3
Eddy Current Testing	Portable, Array	1, 2, 3
*Infrared Thermal Testing	Passive, Active	1, 2, 3

*Not Accredited by SAC to ISO/IEC 17024:2012

This approval is valid until “Date – Month - Year” For NDT training and examinations performed by the above named agency the requirements of EASA AMC 145.A.30.(f)4. have been fulfilled.



SNANDTB Singapore (Chairman)

NDTSS President

EN4179 :Internal Agency Approval

- Audit will be limited days (Mostly 1 day)
- Theory exam could be administered by admin personnel's
- Practical Exam by Examiners
- General Exams will be conducted by SNANDTB/NDTSS, records will be kept by NDTSS and result will be issued to employer.
- No Certification will be issued by the SNANDTB
- However summary will be send to NDTSS/SNANDTB to update database under employer.





ISO 9712 Route for Qualification

- SGNDT – Full compliance with ISO 9712 (similar to PCN Aero)
- Currently available
- Joint program NDTSS-AINDT is available
- ATO Conducts Training to ISO 9712:2012
- AQB / AEC provides practical exam & conducts theory exam – Exam papers General, Specific are provided by NDTSS
- SAC Accredited
- Service is currently available from July 2017



SAC Accreditation



ACCREDITATION SCHEME FOR
PERSONNEL CERTIFICATION BODIES

Number : **PC-2017-03**

Date of Issue : **16 May 2017**

Date of Expiry : **15 May 2021**

Certificate of Accreditation

This certifies that

Non-Destructive Testing Society (Singapore)
25 Admiralty Industrial Park
#02-01 Woodlands Industrial Park E1
Singapore 757743

is accredited by the Singapore Accreditation Council to

ISO/IEC 17024:2012 Conformity assessment -
General Requirements for bodies operating certification of persons

for specific scope as detailed in the attached schedule.


Chairman

This Certificate is awarded subject to the organisation's compliance with the stated criteria and terms and conditions laid down by the Singapore Accreditation Council.

This Certificate may not be reproduced except with the written permission of the Chairman.



ISO 9712 Route

- Candidate will be taken, General, Specific , Practical Exams by the AEC and mandatory training at ATO
- Employer written practice may require supplemental examination for specific
- Employer written practice might include job specific supplemental practical examination, prior to issuing approval.



Annual Review by SNANDTB

Summary of Outside Agency approved by NDTSS/SNANDTB

Summary of OA certified personnel

Summary of IA certified personnel

Summary of 9712 Central Certified personnel (Aerospace sector)

Review of New Methods

Review of Technical committee (if any)

Review of NDTSS Auditors / Examiners functioning directly under SNANDTB.



Discussion ...

Announcement



15th APCNDT 2017 SINGAPORE

November 13 - 17, 2017

The **15th APCNDT** is considered the major regional event for the Asia Pacific Federation for Non-Destructive Testing (APFNDT) and its member societies. The conference includes a technical and scientific program and workshops, which presents the latest developments in the field of research and development as well as the applications of NDT in all major industrial areas. The exhibition organised in conjunction with the conference emphasizes the close link between research and development and the equipment and instruments used in the industry.

**Welcome you all to log in &
Register for Conference**
www.apcndt2017.com

**I would also invite you to visit
the exhibition between Nov 13-
Nov 16**

**80 Exhibitors
270 Speakers**