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# Quality Assurance Documents

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## Operations Manual – NDTSS / NANDTB Qualification & Certification of NDT Personnel engaged in Aerospace Industries

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3	Rename SNANDTB to NDTSS/NANDTB and update NAS 410 requirements and updated logo	21.02.2019
2	Updated Incorporating changes in Board requirements	01.10.2017
1	Totally Revised including updated Board Requirements	14.01.2017
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**Singapore National Aerospace NDT Board, Singapore (NDTSS/NANDTB)**

**Abbreviations:**

NDT	Non- Destructive Testing
NDTSS/NANDTB	Singapore National Aerospace NDT Board
NDTSS	Non- Destructive Testing Society of Singapore
CAAS	Civil Aviation Authority of Singapore
EASA	European Aviation Safety Agency

**Name and Legal Status**

**1.1 Name of the Board**

- a) Singapore National Aerospace NDT Board, Singapore (NDTSS/NANDTB), the board is the scheme committee of NDTSS for EN4179 & NAS410 Scheme

**1.2 Purpose of the NDTSS/NANDTB**

The Singapore National Aerospace NDT Board has agreed the following aims and objectives.

The Board will:

1. Satisfy the Civil Aviation Authority of Singapore (CAAS)'s requirement for a National Aerospace NDT Board as defined by CAAS SAR Part 145 and the version of EN4179:2017, NAS410 Rev 4 and mandated by the Board.
2. Act as custodians for all matters related to employer-based personnel training and certification standards in the aerospace sector.
3. Provide a system for recognition of organisations implementing such standards,
4. Provide a system for recognition of organisations seeking to provide training and/or qualification examinations meeting the requirements of such standards,
5. Provide a system for ensuring that company written practices conform with such standards.
6. Provide a system for assessing organisations for compliance with a company written practice designed to conform with such standards.
7. Provide a mechanism for interpretation, adjudication and arbitration in cases of dispute regarding the implementation of such standards.
8. Set standards for the introduction of New and Emerging Technologies not currently covered by such standards.
9. Seek recognition of its schemes with other European National Aerospace NDT Boards, and with any other pertinent body in order to benefit the Singapore Aerospace industry and to minimise duplication and multiple audit where possible.

**1.3 COMMENCEMENT**

- a) The rules and procedures were agreed by the NDTSS/NANDTB-Singapore on 14th January 2017 subject to the approval of NDTSS Executive committee on relaunching the board on 8<sup>th</sup> August 2017 under NDTSS Management and came into effect upon approval from Singapore Civil Aviation Authority letter of acceptance.

## 2.0 NDTSS/NANDTB – SINGAPORE, CONSTITUTION

### 2.1 Constitution

- 2.1.1 The Singapore National Aerospace NDT Board (NDTSS/NANDTB) is comprised of representatives from various sections of the Singapore aerospace industry including maintenance organization, aerospace design and production organization and non-destructive testing (NDT) service providers, but shall be independent of such organization, and is recognized by the Civil Aviation Authority of Singapore (CAAS).
- 2.1.2 The NDT Society of Singapore (NDTSS) provides secretariat and administrative support to the NDTSS/NANDTB and administers the audit and approval program recognized and overseen by the NDTSS/NANDTB.
- 2.1.3 Organization that satisfy the above, may nominate a suitable technically qualified individual, e.g. a holder of level 3 certification, who forms the NDTSS/NANDTB (The Board). The Board representing the Singapore aerospace industry shall have a mix of voluntary membership from all sections of the Singapore aerospace industry.
- 2.1.4 The Board shall consist of maximum of 15 Members (inclusive of Chairperson and Vice Chairperson). At least 70% of the Board's Members shall hold NDT Level 3 qualification.
- 2.1.5 Organization may at any time change their representation by informing the Secretary of the Board in writing or verbally during a meeting and documented in the minutes. The Board however shall maintain at least 70% NDT Level 3 qualified membership.
- 2.1.6 CAAS & NDTSS shall nominate a person to attend meetings of the NDTSS/NANDTB with Observer Member status. Observers shall not have a voting right.
- 2.1.7 Members of The Board shall retire after two years but will be eligible for re-nomination. The Board shall elect a suitably qualified person as chairperson and vice chairperson.
- 2.1.8 The Chairperson and Vice Chairperson shall take office for a term not exceeding two years and shall be eligible for re-election. The first Chairperson of the board is nominated by the Executive Committee of the NDTSS and approved by the first Board Meeting by NDTSS/NANDTB.
- 2.1.9 The Chairperson of The Board shall be accepted by Director General of CAAS. The Board shall elect a suitably qualified person as Secretary. The Secretary will be appointed for a period not exceeding two years and will be eligible for re-election. The Board may alternatively delegate the duties of Secretary to NDTSS Secretariat, any such arrangements being subject to an annual review.
- 2.1.10 The Board may co-opt no more than three (3) resource members (hereinafter referred to as "the Co-opted member") to serve in the Board. These co-opted members shall provide technical expertise to complement the Board and shall not have a voting right.
- 2.1.11 Members of The Board will have voting rights at the Board meetings. Any organization wishing to apply for membership of The Board should contact the Secretary in the first instance.
- 2.1.12 The membership of The Board would be terminated when:
- the organization decides to withdraw its nominated Member from The Board, or
  - no longer qualifies as representatives of the aerospace sector in Singapore, or if a member performance is unethical or breach the code of conduct or facing legal charges.

### 3.0 NDTSS/NANDTB–SINGAPORE TERMS OF REFERENCE / OPERATIONAL PROCEDURE

#### 3.1 NDTSS/NANDTB –TERMS OF REFERENCE

The Board shall regulate and control the implementation of employer-based NDT personnel certification (or approval) standards within the Civil Aerospace Industry. In furtherance of this the Board will:

- Formulate the policy framework for any scheme that it establishes;
- Maintain an overview of the implementation of its policy by the Secretariat (namely The Non-Destructive Testing Society of Singapore), including but not limited to auditing and approval;
- Maintain an overview of the finances of any schemes which it may cause to be implemented, and approve the methods and levels of any charges in connection thereof;
- Have the authority to set up working groups and committees, establish their terms of reference and set out the procedures whereby they report to the Board. To monitor and review the effectiveness of the Board's Audit function and to appoint/remove Auditors, as appropriate.
- Neither the Board (scheme committee), its Chairman, Vice-Chairman, Corporate members, the bodies they represent, nor any working party or sub-committee appointed by the Board shall carry any financial liability for any scheme(s) operated for the Board, or be liable for any damages resulting, or claimed to have resulted, from decisions of personnel implementing the scheme(s), or for any consequential loss arising out of the operation of the scheme(s).

#### 3.2 NDTSS/NANDTB –OPERATING PROCEDURE

- 3.2.1 The Board shall consider matters of policy at not less than one ordinary meetings per year. Meetings shall be convened on the authority of the Chairman by the Secretary with at least 21 days' notice in writing.
- 3.2.2 Matters of policy to be decided at a meeting shall be supported by written documentation issued in advance of the meeting.
- 3.2.3 The quorum for a meeting shall be the Chairman or the Vice Chairman and three members.
- 3.2.4 If a vote is necessary, full Board members shall have one vote for each organization represented. Co-opted members and observers will not have voting rights.
- 3.2.5 Approval of changes to the constitution, terms of reference and method of working, and invitations for other bodies to be represented on the Board shall be decided by a simple majority.

#### 3.3 REGULAR MEMBERSHIPS

- 3.3.1 Regular membership in the NDTSS is open to suitably qualified nominees from organizations engaged in Non- Destructive Testing.

#### 3.4 ORGANIZATION OF THE NDTSS/NANDTB

##### 3.4.1 Chairman

- a) The members of the NDTSS/NANDTB-Singapore are nominated by the Chairman and the members elect the Vice-Chairman by voting, for the duration of two years. Re-election is possible.
- b) Only a regular member may be elected as Chairman
- c) The Chairman and the Vice-Chairman of the NDTSS/NANDTB-Singapore are responsible for the contacts with all authorities and other organizations.

### 3.4.2 Secretary

The Secretary is elected by the members. The Board may delegate the duties of Secretary to NDTSS Secretariat, any such arrangements being subject to an annual review.

3.4.3 The organization structure is depicted in Appendix 5 of this document

## 3.5 MEETINGS, DISCUSSIONS

3.5.1 When required the Chairman will call a meeting of the NDTSS/NANDTB in coordination with the members in alternating locations. The execution of discussions and voting by email, telephone-conference or comparable media is allowed if it is guaranteed that all members get the same information.

### 3.5.1 ANNUAL GENERAL MEETING

- a) **Supreme Authority:** The supreme authority of the Board is vested in a general meeting of the members presided by the Chairman.
- b) **Annual General Meeting:** The Board shall hold an Annual General Meeting of members in September in each year at a time to be fixed by the Executive Council for the following purposes:
  - (1) To confirm the Minutes of the last Annual General Meeting.
  - (2) To receive and if approved, pass the annual report, balance sheet and statement of accounts for the preceding financial year.
  - (3) To fill the vacancies in the Executive Council and, if no external auditor is to be appointed, to elect two internal auditors for the ensuing year.
  - (4) To decide on any resolution that may be duly submitted to the meeting as hereinafter provided. Any member desirous of moving any resolution at the annual general meeting shall give notice thereof in writing to the Hon. Secretary not less than one (1) week before the date of such meeting.
  - (5) **Extra-Ordinary General Meeting:** The Executive Council may at any time for any special purpose call an Extra-Ordinary general meeting and shall do so forthwith upon the requisition in writing of ten (10) or more Regular Members stating the purpose for which the meeting is required.
    - a. If the Executive Council does not within two months after the date of the receipt of the written request proceed to convene an Extra-Ordinary General Meeting, the members who requested for that Meeting shall convene the Extra-Ordinary General Meeting by giving ten (10) days' notice to voting members setting forth the business to be transacted and simultaneously posting the agenda on the Board's notice board.
  - (6) At least Fourteen (14) days before the Annual General Meeting, or any Extra-Ordinary General Meeting to be called, a notice of such meeting and of the business to be transacted thereat shall be posted in the Board's notice board and a printed copy thereof shall be sent to every member, and no business other than that of which notice has been given shall be brought forward at such meetings. The annual report, balance sheet, statement of accounts and relevant estimate shall be placed in the principal Association room at least fourteen (14) days before the Annual General Meeting. The accidental omission to give any such notice by post to any member shall not invalidate any resolution passed at the Annual General Meeting.
  - (7) Unless otherwise stated in this Constitution, voting by proxy is allowed at all General Meetings.

Website: [www.ndtss.org.sg](http://www.ndtss.org.sg) Email: [certification@ndtss.org.sg](mailto:certification@ndtss.org.sg)

- (8) At least 25% of the total voting membership present at a General meeting shall form a quorum. Proxies shall not be constituted as part of the quorum.
- (9) At all Annual General Meetings of the Board, the Chairman, and in his absence the Vice-Chairman, shall automatically take the chair. In the absence of both the Chairman and Vice-Chairman, then a member elected by the Executive Council shall take the chair.
- (10) Every Regular Member present shall be entitled to one (1) vote upon every motion, and in case of an equality of votes the Chairman shall have a second or casting vote.
- (11) In the event of there being no quorum, the annual general meeting shall be adjourned to the same day in the following week at a place and time to be appointed and thereupon should the number present and eligible to vote being insufficient to form a quorum, those present shall be considered a quorum, but they shall have no power to alter, amend or make addition to any of the existing rules, including regulations made by the Executive Council.
- (12) Any change in this Constitution shall be decided by a majority of not less than three quarters of those present at a meeting. A simple majority shall decide all other matters during the General Meetings.
- (13) The Executive Council shall consist of at least 70% of its regular members having NDT Level 3 qualifications in the aerospace sector

### 3.6 VOTING

- 3.6.1 The NDTSS/NANDTB is entitled to vote providing the Chairman or the Vice Chairman and the members can participate in the vote.
- 3.6.2 In the case of a tie, the Chairman will have the casting vote.
- 3.6.3 In general, voting takes place by open ballot.

### 3.7 RESOLUTIONS

- 3.7.1. Resolutions are recorded in writing by the Secretary including the location, type of communication and the date and time of the meeting and the voting results.
- 3.7.2. The document may be signed electronically.
- 3.7.3. A copy of the minutes will be made available to all members.

### 3.8 PUBLICATIONS

- 3.8.1. Documents approved by the NDTSS/NANDTB particularly directives and decisions which are not declared as classified material, will be made available to the public. The publication when possible will be published on the Internet.
- 3.8.2. A table of members will be published.
- 3.8.3. All certification related documents shall be approved by the certification committee

## 4.0 APPROVAL PROCEDURE FOR NDT OUTSIDE AGENCIES

### 4.0 PURPOSE

- 4.1.1 The purpose of this guideline is to ensure that the assessment and approval of Outside Agencies providing NDT training and examination or other NDT services to the aerospace industry is carried out in accordance with EN 4179, NAS410 and SAR Part 145/EASA Part 145 requirements.

### 4.1 DEFINITIONS

#### 4.2.1 Outside Agency

An independent body providing training and examination of NDT personnel, or any other NDT services to the requirements of EN 4179 & NAS410



#### 4.2.2 Approval of Outside Agencies.

Confirmation by the NDTSS/NANDTB that the outside agency is qualified and authorized to conduct NDT training and examinations or other NDT services in accordance with EN 4179 & NAS410.

### 4.2 PROCEDURE

#### 4.3.1 Applications

NDT outside agencies requesting recognition as approved establishment shall submit a written application to NDTSS/NANDTB

#### 4.3.2 Description

The application for approval shall contain the following information:

- Name and address of the Outside Agency.
- Evidence that the outside agency is an approved training / examination / service provider.
- Course(s) / Examination(s) / Service(s) for which the agency is seeking for approval.
- Responsible coordinator at the NDT Outside Agency.

### 4.3 ASSESSMENT

#### 4.4.1 Audits of Outside Agencies to include the following items:

- Assessment of quality system, documents and procedures.
- Assessment of the training personnel.
- Assessment of written practices provided under Level 3 services.
- Assessment of the applicant's facilities.
- Assessment of the training modules.
- Assessment of the sample and the security of examination questions.

#### 4.4.2 Audits may not be required for Outside Agencies that hold approval from their own National Aerospace NDT Board.

### 4.5 AUDIT TEAM

The NDTSS/NANDTB shall appoint an audit team to perform the audit.

#### a) Audit Checklist

Audits are performed with an audit checklist agreed by the NDTSS/NANDTB.

#### b) Audit Report / Recommendation

The audit team shall prepare a report and make a recommendation to NDTSS/NANDTB.

#### c) Approval of Outside Agencies

A certificate of Approval will be issued by the NDTSS/NANDTB to outside agencies that meet the requirements of the NDT Board audit. In the case where an agency is refused approval, the NDT Board shall furnish the reasons for declining approval.

#### d) Repeat Audits

If approval is not granted because of failure to meet the minimum requirements wholly or partly, the applicant shall be requested to submit to a new audit within 6 calendar months of the original audit to prove that applicant has met the requirements in areas which were previously found to be inadequate. If this is not done, the consequence will be that the applicant will have to repeat the procedure for first application.

### 4.6 DURATION OF OUTSIDE AGENCY APPROVAL

- a) The NDTSS/NANDTB may set the duration of validity of the approval at its own discretion, between one and five years. It is the responsibility of the agencies coordinator to apply for a new assessment at the proper time. If possible, the application should be made at least 3 months before the requested date of the audit.

#### 4.7 NOTIFICATION OF OUTSIDE AGENCY CHANGES

- a) The NDTSS/NANDTB shall be notified immediately if changes in the management, personnel, documentation, facilities or organizational procedures occur in an outside agency which may affect the validity of their approval. Failure to do so may result in withdrawal of their approval.

#### 4.8 MANAGEMENT OF COMPLAINTS

- a) The NDTSS/NANDTB, where applicable, will investigate complaints from the participants in the training courses / examinations. The outside agency approval may be withdrawn at any time within its period of validity if investigations by the SNANDTB reveal non-conformities that, in the Board's opinion, justify a withdrawal.

#### 4.9 WITHDRAWAL OF OUTSIDE AGENCIES APPROVAL

- a) Should it become known to the NDTSS/NANDTB that the conditions on which approval were granted to an outside agency are no longer fulfilled, the approval shall be withdrawn in writing.

#### 4.10 EXTENSIONS TO OUTSIDE AGENCIES APPROVAL

- a) Additional NDT Methods.  
Validation of additional NDT Methods after the first audit may or may not require a further audit. The NDTSS/NANDTB should be sent a copy of the syllabus and course documents, a list of the test equipment, test specimens and the qualifications of the instructors along with an application for validation of additional NDT Methods.
- b) Additional places of training  
If the NDT outside agency conducts a training course at a place other than their own audited premises they shall inform the NDTSS/NANDTB. The outside agency coordinator shall be responsible for ensuring compliance with EN 4179 & NAS410 at off-site locations.

#### 4.11 DISSOLUTION

- a) **Dissolution** – The Board shall not be dissolved, except with the consent of not less than 3/5 of the total voting membership of the Board for the time being resident in Singapore expressed, either in person or by proxy, at a General Meeting convened for the purpose.
- b) **Liabilities** - In the event of the Board being dissolved as provided above, all debts and liabilities legally incurred on behalf of the Board shall be fully discharged, and the remaining funds shall be disposed of in accordance with the decision of the members at the General Meeting.
- c) **Certificate** - A notice of dissolution shall be given within 7 days of the dissolution to all members of the Board.

#### 4.12 USE OF LOGOS, TRADEMARKS AND IMAGES

- a) The use of the Board's logo, name, slogans and/or images must be given prior recommendation and approval by the Secretary and Chairman respectively.

## APPENDIX 1: AUDIT CHECKLISTS FOR ACCREDITING OUTSIDE AGENCIES

### A1.1 Purpose

- a) The NDTSS/NANDTB audit for approval of Outside Agencies engaged in the qualification and certification of personnel involved in non-destructive testing (NDT) seeks to establish compliance with the criteria of EASA part 145 regulations and EN 4179 requirements. These requirements include training, experience and examinations for personnel performing NDT in the aerospace manufacturing, service, maintenance and overhaul industries.
- b) The audit scope and procedure shall assess the Outside Agencies quality system, documents and procedures, training personnel, Level III consultancy services, facilities, training modules, sample and security of examination questions and test specimens etc.
- c) The auditor shall meet the requirements of EN 4179 clause 5.1.8 and the following applicable check lists shall be used in the course of the audit:
  - Visit Program for Outside Agencies.
  - Written Practice (WP) Checklist.
  - General Assessment Checklist.
  - Penetrant Testing (PT) Checklist.
  - Magnetic Testing (MT) Checklist.
  - Eddy Current Testing (ET) Checklist.
  - Ultrasonic Testing (UT) Checklist.
  - Radiographic Testing (RT) Checklist.
  - Audit Report.
  - NDTSS/NANDTB Certificate of Approval. (Sample)
- d) The auditing team shall provide the NDTSS/NANDTB with an Audit Report of the Outside Agency.
- e) Based on the audit report being satisfactory the NDTSS/NANDTB will issue a Certificate of Approval to the Outside Agency in accordance with section 4 of the NDTSS/NANDTB control document (Approval Procedure for NDT Outside Agencies).

## APPENDIX 2: SAMPLE VISIT PROGRAMME

Location:

Date/time:

Audit Type: Initial, Follow-up or Reassessment

Audit Team:

Audit Criteria: NDTSS/NANDTB / EN 4179 Approval

Audit procedure:

### OUTSIDE AGENCY

- Opening meeting.
- Confirmation of visit scope (Training / Examination / Consultancy Service) and appointment of a guide.
- Review of documentation.
- Outside Agency Quality system documents and procedures.
- Availability of codes, documents and specifications.
- Review of written practices provided under Level 3 consultancy services. (Review to cover scope, content and implementation of a client's request against the requirements of EN 4179).
- Contract review (ensuring client requirements are fully specified, recorded, understood and delivered).
- Control of customer supplied product (documentation, specifications, procedures, equipment, examination facilities and appropriate practical specimens).
- Training and examination resources (ensuring that they are relevant and appropriate to the client's NDT equipment, processes, and products).
- Training curriculum.
- NDT Equipment.
- Specimens.
- Specific examination questions.
- Appointment of appropriately qualified and experienced training and examination staff.
- Confidentiality, impartiality and security.
- Compilation of written specific and practical examinations appropriate to scope.
- Examination marking and grading.
- Records (of registration, training and examination).
- Issue of training and examination reports and certificates.
- Contract delivery (review of training and examinations provided against the contract).
- Closing meeting.

### APPENDIX 3: ASSESSMENT CHECK LIST

#### A3.1 Written Practice (WP)

1. Are NDT personnel qualified in accordance with a written practice?
2. Is the written practice developed by the employer or an outside agency.
3. Does the written practice name the responsible level 3 and define duties, responsibilities and the organizational structure etc.
4. Does the written practice define the NDT Methods and Levels of qualification used by the employer?
5. Does the written practice address specific NDT methods? Are specific techniques defined and documented?
6. Are the duties and responsibilities identified for each of the NDT Levels of Personnel?
7. Visual acuity and color perception. Are tests administered by personnel designated by the responsible Level 3, NDTSS/ANDTB, or the outside agency.
8. Has the employer documented its acceptance of an NDTSS/NANDTB or Outside Agency for provision of training and / or examinations, and on what basis has it approved the agency to qualify its NDT personnel.
9. Is the minimum experience required for certification in each NDT method and, where applicable, NDT technique (s), stipulated?
10. Records for NDT personnel covering training, experience, examinations, company approval (s), eye tests etc.
11. Does the written practice state the employer's requirements for recertification, and the conditions and requirements for suspension, revocation and reinstatement of certification?
12. Is the training provider familiar with the employers written instructions; applicable codes, specifications, documents, materials, components, product technology, methods and techniques.
13. Compliance. The employer is solely responsible for certification or approval of personnel. Is compliance by sub-contractors or outside agencies covered. Is compliance confirmed by audit.
14. Is Health and Safety training provided covering; hazardous substances, radiation safety, electrical safety, accident prevention and risk assessment.

#### A3.2 General Assessment

1. Outside Agency; quality system, documents and procedures.
2. Availability of codes, documents and specifications, including the client's written practice.
3. Review of written practices provided under Level 3 service.
4. Contract review (ensuring client requirements are fully specified, recorded, understood and delivered).
5. Control of customer supplied product (documentation, specifications, procedures, equipment, examination facilities and appropriate practical specimens).

6. Training and examination resources (ensuring that they are relevant and appropriate to the client's NDT equipment, processes, and products). Training curriculum, facilities, equipment, specimens.
7. Compilation of written specific and practical examinations.
8. Security of examination questions and test specimens.
9. Examination marking and grading.
10. Records (of registration, training and examination).
11. Issue of training and examination reports and certificates.

### A3.3 Penetrant Testing (PT)

1. Is there a penetrant line available for different penetrant systems / methods?
2. Are the penetrant lines correctly labelled?
3. What performance checks are carried out on penetrant systems.
4. Are there penetrant test panels available?
5. Is the drying oven temperature controlled?
6. Is there a visible light meter available?
7. Is there a black light and black light meter available?
8. Is there a refractometer available?
9. Is there a satisfactory range of aerospace training parts available?
10. Is the inspection area adequate for training / inspection?
11. Is there ancillary equipment available, (e.g. microscope /magnifying glass).
12. Is the storage of the penetrant materials in accordance with the relevant safety recommendations?

### A3.4 Magnetic Testing (MT)

1. What type of magnetization units are available e.g., bench type, portable or electromagnets.
2. Is there a demagnetizing unit available?
3. Is there a gauss meter / field strength meter available?
4. Is there a visible light meter available?
5. Is there a black light and black light meter available?
6. Are periodical checks of the suspension carried out.
7. What performance checks are carried out on the equipment.
8. Is there a satisfactory range of aerospace training parts available?
9. Is the inspection area adequate for training / inspection?
10. Is there ancillary equipment available, (e.g. microscope /magnifying glass).

### A3.5 Eddy Current Testing (ET)

1. Are there adequate eddy current test instruments available?
2. Is there a test instrument for conductivity measurements?
3. Is there an adequate range of eddy current probes?
4. Is there an adequate range of calibration documents available?
5. Is there a satisfactory range of aerospace training parts available?
6. What performance checks are carried out on Eddy Current Instruments / Probes.

### A3.6 Ultrasonic Testing (UT)

1. Are there adequate ultrasonic / bond instruments available.
2. Is there an adequate range of ultrasonic transducers available?
3. Is there an adequate range of calibration documents available?
4. Is there a satisfactory range of aerospace training parts available?
5. What performance checks are carried out on Ultrasonic Instruments and transducers.

### A3.7 Radiographic Testing (RT) Comments

1. Is the radiographic facility in accordance with a national regulation?
2. Is there a monitor available for measuring ionizing radiation?
3. Is the film processor (automatic / manual) controlled?
4. Is there adequate support tooling such as film, screens, lead letters, step wedges, shielding etc. available.
5. Is there a densitometer available?
6. Are there IQI's available.
7. Are there appropriate viewers available?
8. Is the darkroom appropriately equipped?
9. Is there a satisfactory range of aerospace training parts available?
10. What performance checks are carried out on the x-ray units / film processor / densitometer / radiation monitors etc.

### APPENDIX 4: SAMPLE AUDIT REPORT.

Company:

Location:

Date/time:

Audit Type: Initial, Follow-up, Reassessment or Extension to Scope

Audit Team:

Audit Criteria: NDTSS/NANDTB /EN 4179 Approval

Audit report:

1. Overall assessment of Outside Agency.
2. Description of non-conformances if applicable.
3. Corrective action required and agreed by the Outside Agency.
4. Preventative action taken by the Outside Agency.
5. Action completed and accepted by the auditor.

Auditor \_\_\_\_\_

Auditor \_\_\_\_\_

Date \_\_\_\_\_

**APPENDIX 5: SAMPLE APPROVAL CERTIFICATE.**

*National Aerospace NDT Board*

*Herewith NDTSS/NANDTB Confirms, that the NDT Agency*

*Certificate Number SA.....*

*“Name of NDT Agency”*

*Has been audited by the NDTSS/NANDTB – Singapore and found to provide the specified services in accordance with EN: 4179 /NAS410*

- 1: Qualification of NDT Personnel*
- 2: Level III Consultancy Services*

NDTSS/NADTB- approval is conditional upon the organisation continuing to provide the specified services to the document witnessed during the assessment

*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.*

\_\_\_\_\_  
*NDTSS/ NANDTB (Chairman)*

\_\_\_\_\_  
*NDTSS President*



**APPENDIX 6: ORGANIZATION STRUCTURE OF THE NDTSS/NANDTB**

