

NEPALESE CIVIL AIRWORTHINESS REQUIREMENTS

SECTION D

Approval Procedures

CHAPTER D.7

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NON-DESTRUCTIVE TEST PERSONNEL

1. Introduction

This Chapter prescribes,

- (a) The requirements for the grant of an approval to undertake nondestructive testing of aircraft, components or equipment.
- (b) The responsibilities of approved non-destructive testing personnel in respect of inspections on parts of an aircraft or its components and equipment, the failure of which could jeopardize the safety of an aircraft.

2. Definitions

Certificate of Competency - A certificate issued by CAA Nepal to perform specialized processes such as NDT, which may affect the airworthiness of an aircraft.

NDT - LEVEL I - defines the level of competency required by the applicant to have the skills and knowledge to process parts, any necessary preparation of parts before or after inspection and perform equipment standardization in accordance with written instruction approved by the appropriate level 3.

Note: Level-I qualification does not entitle a person for issue of Certificate of Competency.

NDT - LEVEL II - defines the level of competency required by the applicant for certification of NDT Level II calls for in-depth training, experience, and basic knowledge of aircraft product manufacturing and inspection technology. He will be capable of setting up and calibrate test equipment, make decision and judgment, evaluate, interpret and certify inspection result in technique in which he is qualified.

NDT - LEVEL III- defines the level of competency required by the applicant for

certification of NDT Level III should have the skills and knowledge to interpret codes, standards and other contractual documents that control the NDT method(s) as utilized by the employer. He will be capable of selecting, preparing and verifying the adequacy of procedures in the method certified and technique for a specific inspection. He will also be capable of providing or directing training, examination and certification of personnel in the method in which he is certified.

3. Applicability

No person will carry out specialized processes such as Non-Destructive Testing (NDT) of aircraft structures, aircraft parts, engine parts unless issued with Certificate of Competency (C of C) by CAA Nepal.

4. Non-Destructive Testing

4.1 Requirements for issue of C of C

No person will carry out and certify NDT inspection on an aircraft/aircraft engine or its component unless issued with Certificate of Competency for specific NDT techniques by CAA Nepal.

The C of C may be issued in one or more of the following NDT techniques: -

- a) Magnetic Particle Inspection (MPI)
- b) Fluorescent Penetrant Inspection (FPI)
- c) Eddy Current Inspection (ECI)
- d) Ultrasonic Inspection (UI)
- e) Radiography (RI)

Note - NDT technique(s) not covered above shall be referred to CAA Nepal.

4.2 Qualification

The applicant shall have passed at least

- a) Diploma in Science or Engineering with Physics and Mathematics; or
- b) Graduate in engineering/any other equivalent qualification acceptable to CAA Nepal;
and

- c) Should hold at least Level II competency in each relevant NDT technique
- d) With respect to para 4.2.(c) CAA Nepal will accept European Standard EN473 /EN4179 qualifications or equivalent such as NAS 410

4.3 Experience

4.3.1. The applicant shall have minimum of 6 months experience in past 24 months in relevant NDT technique; of which three months must be recent experience.

4.3.2. In case a candidate does not fulfill requirements stated in 4.3.1, the candidate is subjected to proficiency test.

4.3.3. For amendment of C of C to cover additional technique the applicant shall have acquired at least 3 months recent experience in respective NDT technique .

5. Issue of C of C in NDT

An applicant desirous of obtaining C of C shall apply to CAA Nepal on prescribed form. On being satisfied that the applicant meets the requirements with regard to qualification, experience, vision and skill he may be issued with a Certificate of Competency, covering the relevant NDT technique by CAA Nepal.

5.1 Validity

The Certificate of Competency (C of C) for all types will be valid for a period not exceeding **24 months** at a time.

5.2. Renewal of C of C

The Certificate of competency may be renewed for a further period of 24 months at a time provided the applicant:

- a) Applies to CAA Nepal on a prescribed proforma for renewal of C of C, at least 15 days prior to the date of expiry.
- b) Shall have a minimum of Six months experience in the last 24 months.
- c) Has satisfied the vision requirement for renewal of C of C for NDT.
- d) Has undergone a refresher course at least once in 24 months.
- e) Shall have the validity of Level II certificate.

f) Whenever the applicant fails to meet the renewal requirements CAA Nepal may subject the applicant for additional tests/examination

6. General

6.1. Medical / Vision standards for C of C holders

a) Shall not have any physical disabilities, which impairs his normal functions as holder of C of C. The examination must be on a periodic basis, not to exceed one year.

b) **Normal Vision** - an examination to assure near vision, of at least one eye, either corrected or uncorrected, must be such that the employee can read SNELLEN equivalent of 20/25 (Jaeger#2).

Distance vision, of at least one eye either corrected or uncorrected, must be equal to or better than SNELLEN equivalent 20/30 (Jaeger#3). The examination must be on a periodic basis, not to exceed one year.

c) **Colour perception requirements-** The applicant shall be required to demonstrate the ability to perceive readily those colors the perception of which is necessary for the safe performance of duties. The applicant shall be tested for the ability to correctly identify a series of pseudoisochromatic plates (tables) in daylight or in artificial light of the same color temperature such as that provided by the Illuminant "C" or "D" as specified by the International Commission on Illumination (ICI). The examination must be on a periodic basis, not to exceed five years.

6.2. Applicants who have acquired the educational and technical qualification as spelt out above may apply through their organization to CAA Nepal. The experience claimed by the applicant has to be authenticated by QCM after going through the applicant's logbooks. The application should be submitted in the prescribed form.

6.3. FEES - For issue/ renewal of C of C the applicable fees as per regulations shall be paid.

6.4. Records

The applicant shall maintain certification records for as long as their certification is in effect. Such records shall be available for audit. The records shall include, as a minimum:

a) Name of the individual certified;

b) Level, method, and techniques for which individual certified;

- c) Date and expiration of current certification(s)
- d) A summary of all previous NDT certifications;
- e) Training history which identifies source, type of training, dates of training and course hours;
- f) Experience history, including any previous certifications, sufficient to justify satisfaction of experience requirements for certification;
- g) Results of the most-recent (i.e. current) visual acuity and color perception examinations;
- h) Extent and documentation of formal education, when used to meet qualification requirements;
- i) The name and signature of the employer's representative authorizing the certification.

7. Privileges of Certificate of Competency holder

7.1. To carry out and issue certificate of release to service in respect of NDT work performed.

8. Recertification for LEVEL- I, LEVEL - II and LEVEL-III

8.1 Level- I and Level- II personnel shall be re-certified at intervals not to exceed **60 months**. Practical and specific examination equivalent to those required for initial certification shall be administered for Level I and Level II. Certification is considered to expire at the end of corresponding month in which the certification began.

8.2 Level-III personnel shall be re-certified at intervals not to exceed **60 months**. Recertification shall be accomplished in accordance with NAS 410, or by specific and practical re-examination equivalent to initial certification.

9. Suspension/Cancellation of C of C

The CAA Nepal shall suspend, limit or revoke the Certificate of Competency where it has identified a safety issue or if it has clear evidence that the person has carried out or been involved in one or more of the following activities:

- a) Obtaining C of C and/or the certification privileges by falsification of submitted evidence.

- b) Certifying without carrying out required NDT procedures combined with a failure to report such fact.
- c) Failing to report defects noticed during NDT procedures to responsible person for repair action combined with failure to report such fact.
- d) Failure to follow proper NDT Procedures.
- e) Negligent application of NDT Procedures.
- f) Falsification of the NDT record.
- g) The issue of a Certificate of Release to Service for NDT work, knowing that the NDT work specified on the Certificate of Release to Service has not been carried out or without verifying that such NDT work has been carried out.
- h) Carrying out NDT work or issuing a Certificate of Release to Service for such work when medically unfit or adversely affected by alcohol or drugs.

Civil Aviation Authority of Nepal.