

საქართველოს სტანდარტი

აეროკოსმოსური სერიები - პერსონალის კვალიფიკაცია და დამტკიცება
არადესტრუქციული გამოცდისათვის

საქართველოს სტანდარტებისა და მეტროლოგიის
ეროვნული სააგენტო
თბილისი

სსტ ენ 4179:2017/2018

საინფორმაციო მონაცემები

1 დამტკიცებულია და შემოღებულია სამოქმედოდ საქართველოს სტანდარტებისა
და მეტროლოგიის ეროვნული სააგენტოს 2018 წლის 27 აპრილის
№ 39 და 2018 წლის 7 მარტის № 14 განკარგულებებით

2 მიღებულია თავფურცლის თარგმნის მეთოდით სტანდარტიზაციის ევროპული
კომიტეტის სტანდარტი ენ 4179:2017 „აეროკოსმოსური სერიები - პერსონალის
კვალიფიკაცია და დამტკიცება არადესტრუქციული გამოცდისათვის”

3 პირველად

4 რეგისტრირებულია საქართველოს სტანდარტებისა და მეტროლოგიის
ეროვნული სააგენტოს რეესტრში: 2018 წლის 27 აპრილი
№268-1.3-013003

აკრძალულია ამ სტანდარტის გადაცემა მესამე პირებისათვის ან/და მისი სხვა ფორმით
გავრცელება

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 4179

January 2017

ICS 49.020

Supersedes EN 4179:2009

English Version

Aerospace series - Qualification and approval of personnel
for non-destructive testing

Série aérospatiale - Qualification et agrément du
personnel pour les essais non destructifs

Luft- und Raumfahrt - Qualifizierung und Zulassung
des Personals für zerstörungsfreie Prüfungen

This European Standard was approved by CEN on 22 July 2016.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

Contents

	Page
European foreword	5
1. SCOPE	6
1.1 PURPOSE	6
1.2 APPLICABILITY	6
1.2.1 IMPLEMENTATION.....	6
1.3 COMMON METHODS.....	6
1.3.1 OTHER METHODS.....	7
2. REFERENCE DOCUMENTS.....	7
2.1 STANDARDS.....	7
2.2 ORDER OF PRECEDENCE.....	7
3. DEFINITIONS AS APPLIED TO THIS STANDARD	7
3.1 CERTIFICATION.....	7
3.2 CLOSED BOOK EXAMINATION	7
3.3 COGNIZANT ENGINEERING ORGANIZATION	7
3.4 DIRECT OBSERVATION.....	8
3.5 DIRECT READOUT INSTRUMENT	8
3.6 DOCUMENTED	8
3.7 EMPLOYER.....	8
3.8 EVALUATION.....	8
3.9 EXAMINATION	8
3.10 EXAMINER.....	8
3.11 EXPERIENCE	8
3.12 FORMAL EDUCATION	8
3.13 FORMAL TRAINING	9
3.14 GENERAL EXAMINATION	9
3.15 INDICATION.....	9
3.16 INSTRUCTOR.....	9
3.17 INTERPRETATION.....	9
3.18 METHOD	9
3.19 NATIONAL AEROSPACE NDT BOARD (NANDTB).....	9
3.20 NON-FILM RADIOGRAPHY.....	9
3.21 ON-THE-JOB TRAINING	9
3.22 OPEN BOOK EXAMINATION	9
3.23 OPERATING APPROVAL	10
3.24 OUTSIDE AGENCY	10
3.25 PRACTICAL EXAMINATION	10
3.26 PRIME CONTRACTOR	10
3.27 PROCEDURE	10
3.28 QUALIFICATION	10
3.29 RESPONSIBLE LEVEL 3	10
3.30 SPECIFIC EXAMINATION	10
3.31 SUB-CONTRACTOR.....	10
3.32 TECHNIQUE.....	10
3.33 TEST SAMPLE.....	11

3.34	WORK INSTRUCTION	11
3.35	WRITTEN.....	11
3.36	WRITTEN PRACTICE	11
4.	GENERAL REQUIREMENTS.....	11
4.1	WRITTEN PRACTICE	11
4.1.1	ADDITIONAL REQUIREMENTS.....	11
4.1.2	NDT TECHNIQUES	12
4.1.3	TRAINING OUTLINES.....	12
4.1.4	EXAMINATION PRACTICES	12
4.1.5	ADMINISTRATION.....	12
4.1.6	RECORDS	12
4.2	METHODS.....	12
4.3	LEVEL 1-LIMITED	12
4.4	RESPONSIBILITY	13
4.4.1	RESPONSIBLE LEVEL 3	13
4.4.2	NATIONAL AEROSPACE NDT BOARD (NANDTB)	13
4.4.3	OUTSIDE AGENCY	14
5.	QUALIFICATION AND CERTIFICATION LEVELS	14
5.1	LEVELS OF QUALIFICATION AND CERTIFICATION	14
5.1.1	TRAINEE	14
5.1.2	LEVEL 1-LIMITED	15
5.1.3	LEVEL 1	15
5.1.4	LEVEL 2	15
5.1.5	LEVEL 3	16
5.1.6	AUDITOR.....	16
6.	TRAINING AND EXPERIENCE.....	16
6.1	TRAINING	16
6.1.1	TRAINING OUTLINES.....	17
6.1.2	PREVIOUS TRAINING	18
6.1.3	EQUIVALENT TRAINING.....	18
6.1.4	HEALTH AND SAFETY TRAINING.....	18
6.1.5	TRAINING FACILITIES.....	18
6.2	TRAINING AND EXAMINATION PERSONNEL.....	18
6.2.1	EXAMINERS	18
6.2.2	INSTRUCTORS	19
6.2.3	OUTSIDE AGENCIES	19
6.3	EXPERIENCE.....	19
6.3.1	PREVIOUS EXPERIENCE	19
6.3.2	EQUIVALENT EXPERIENCE.....	19
6.4	EMERGING NDT METHODS	20
6.4.1	LEVELS 1 AND 2	20
6.4.2	LEVEL 3	21
7.	EXAMINATIONS.....	21
7.1	PURPOSE	21
7.1.1	VISION	21
7.1.2	GENERAL	22
7.1.3	SPECIFIC	22
7.1.4	PRACTICAL	23
7.2	ADMINISTRATION OF EXAMINATIONS	24
7.2.1	ADMINISTRATION BY AN OUTSIDE AGENCY	24

7.2.2 SCORING	24
7.2.3 RE-EXAMINATION	25
8. CERTIFICATION.....	25
8.1 GENERAL.....	25
8.2 RECORDS	25
8.2.1 RECORD AVAILABILITY.....	25
8.3 LOSS OF CERTIFICATION	26
8.3.1 EXPIRATION	26
8.3.2 SUSPENSION	26
8.3.3 REVOCATION.....	26
8.4 REINSTATEMENT OF CERTIFICATION	26
8.5 RECERTIFICATION	26
8.5.1 LEVEL 1-LIMITED, LEVEL 1 AND LEVEL 2	26
8.5.2 LEVEL 3	27
8.6 ANNUAL MAINTENANCE	27
Annex A Credit System for Recertification of Level 3 NDT Personnel	28

TABLES

TABLE I – MINIMUM FORMAL TRAINING HOURS FOR LEVEL 1 & LEVEL 2	17
TABLE IA – RT FORMAL TRAINING HOURS FOR TRANSITION TO FILM AND NONFILM	17
TABLE II – MINIMUM EXPERIENCE REQUIREMENTS FOR LEVEL 1 & LEVEL 2	20
TABLE IIA – RT EXPERIENCE REQUIREMENTS FOR TRANSITION TO FILM AND NONFILM.....	20
TABLE III – MINIMUM EXPERIENCE REQUIREMENTS FOR LEVEL 3 IN COMMON METHODS	20
TABLE IV – MINIMUM REQUIREMENTS FOR FIRST LEVEL 3 IN AN EMERGING NDT METHOD	21
TABLE V – VISION REQUIREMENTS.....	22

European foreword

This document (EN 4179:2017) has been prepared by the Aerospace and Defence Industries Association of Europe - Standardization (ASD-STAN).

After enquiries and votes carried out in accordance with the rules of this Association, this Standard has received the approval of the National Associations and the Official Services of the member countries of ASD, prior to its presentation to CEN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by July 2017, and conflicting national standards shall be withdrawn at the latest by July 2017.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN 4179:2009.

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.