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Certification Policies for EN Standards Concrete Compressive Strength Testing Technician

*Last revised by the Certification Programs Committee
April 18, 2024*

The statements contained herein are approved policies and procedures. This revised policy statement supersedes all previous action of the ACI Board of Direction with respect to EN Standards Concrete Compressive Strength Testing Technician certification.

The certification program policies are organized into nine sections as follows:

Section 1.0	Certification Criteria
Section 2.0	Definitions
Section 3.0	Examination Criteria
Section 4.0	Re-examination Criteria
Section 5.0	Appeals Criteria
Section 6.0	Sponsoring Group Criteria
Section 7.0	Examiner/Supplemental Examiner Criteria
Section 8.0	ACI Responsibilities
Section 9.0	Recertification Criteria

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SECTION 1.0 CERTIFICATION CRITERIA

- 1.1 The American Concrete Institute (ACI) certification program for EN Standards Concrete Compressive Strength Testing Technician requires successful completion of a written examination and a performance examination. No certifications will be granted by ACI without successful completion of both examinations.
- 1.2 No specific education or work experience is required as a prerequisite for EN Concrete Compressive Strength Testing Technician certification.
- 1.3 ACI certification as an EN Standards Concrete Compressive Strength Testing Technician shall be valid for a period of five [5] years from the date all certification requirements are completed.
- 1.4 Certification is renewed by satisfying the recertification requirements specified in section 9.0 of this policy.

SECTION 2.0 DEFINITIONS

- 2.1 Examinee - a person taking either the written or performance examination, or both.
- 2.2 Examiner - a person authorized by ACI to be in responsible charge of an examination session.
- 2.3 Performance Exam Checklist - a list of criteria used by the supplemental examiner to judge the compliance of the examinee with the provisions of the performance examination.
- 2.4 Proctor - a person authorized to assist the Examiner in conducting the written examination.
- 2.5 Supplemental Examiner - a person who assists the examiner by administering the performance examination.

SECTION 3.0 EXAMINATION CRITERIA

GENERAL REQUIREMENTS

- 3.1 The content of the written and performance examinations for certification as an EN Standards Concrete Compressive Strength Testing Technician is derived from the *Job-Task Analysis for ACI EN Standards Concrete Compressive Strength Testing Technician Certification* (Annex 613.2-1).

ACI will grant certification to examinees who successfully complete both the written and performance examinations within a one (1) year period.

- 3.2 There shall be no questions regarding general concrete technology on the written examination.

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- 3.3 The examinations shall be conducted by the examiner, proctors, and/or supplemental examiners as applicable. [See Section 7.0]
 - 3.4 The Examiners, proctors, supplemental examiners, and/or Sponsoring Groups have no jurisdiction over the content of any examination or over the grading of the written examination.
 - 3.5 All written and performance examinations are closed-book. Notes or other technical material will not be permitted in the examination area. Use of simple-function (*i.e.*, non-programmable) calculators will be permitted, but examinees will not be allowed to share calculators.

WRITTEN EXAMINATION

- 3.6 The written examination for certification as an EN Standards Concrete Compressive Strength Testing Technician shall consist of approximately thirty to thirty-six [30–36] multiple choice questions, with ten to twelve [10–12] questions on each of the specified Parts of the method.
- 3.7 A maximum of one [1] hour shall be permitted for completion of the written examination.
- 3.8 Verbal administration of the written examination is permitted, upon approval by the Examiner.
- 3.9 Successful completion of the written examination shall be considered as meeting both the following requirements:
 - A) Score sixty percent [60%] or higher on each individual Test Method and/or Practice (*i.e.*, six [6] correct out of ten [10] questions); AND
 - B) Score a minimum of seventy percent [70%] for the overall examination (*i.e.*, twenty-one [21] correct out of a possible thirty [30]).

PERFORMANCE EXAMINATION

- 3.10 The performance examination for certification as an EN Standards Concrete Compressive Strength Testing Technician requires the examinee to perform, in their entirety, each of the following Parts of EN 12390 – Parts 1, 3 and 7.
- 3.11 The examinee shall conduct the performance examination in the direct presence of the examiner or supplemental examiner(s).
- 3.12 The examinee's performance shall be evaluated based on the criteria of the performance examination checklist.

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- 3.13 Grading for the individual performance examinations shall be on a pass/fail basis only, with the examiner/supplemental examiner indicating a passing or failing score for each step of the checklist.
 - 3.14 Incorrect performance, or omission of one or more of the steps of the performance checklist, shall constitute failure of that trial.
 - 3.15 An examinee shall be allowed a second trial for each of the applicable parts of the Test Method on the same day of the examination, if the first trial was not successfully completed.
 - 3.16 The second trial of a particular test shall not be conducted immediately following the first trial.
 - 3.17 For each test method, an examinee shall be permitted to suspend one trial and begin the procedure over again. A voluntary suspension of a trial shall not be counted as a failure of that trial.
 - 3.18 The examiner/supplemental examiner shall not stop a trial when an error is made.
 - 3.19 A second trial (or voluntary repeat of a trial) shall require performance of the entire Test Method from the beginning of the test, not from the point the error was made or the trial was suspended.
 - 3.20 Immediately following completion of each trial, the examiner/supplemental examiner shall inform the examinee of the results, either pass or fail.
 - 3.21 When a failure of a trial has occurred, the examiner/supplemental examiner shall inform the examinee of the particular step(s) performed incorrectly.
 - 3.22 The examinee shall be permitted to leave the examining area between trials to consult notes or books.
 - 3.23 It shall be the Sponsoring Group's responsibility to provide equipment that conforms to the applicable Test Methods and Practices and to ensure that the equipment is in proper working order. The examinee shall not be penalized as a result of faulty or incorrect equipment.
 - 3.24 Failure on any of the prescribed Parts of the Test Method after two [2] trials will constitute failure of that part of the performance examination.

SECTION 4.0 RE-EXAMINATION CRITERIA

- 4.1 Failure of the written examination by either of the criteria cited under Section 3.9 shall require re-examination on the entire written examination.
- 4.2 Invalidation of the performance examination (e.g., non-conformance with Section 7.5) or failure on one [1] or more of the three [3] required Test Methods shall require re-examination on the entire performance examination.

- 4.3 Successful re-examination on the written or performance examination must be completed within one [1] year of the initial examination. Otherwise, both the written and the performance examinations must be retaken in their entireties.

SECTION 5.0 APPEALS CRITERIA

- 5.1 All appeals shall be directed initially to the examiner.
- 5.2 In the event that the examinee is not satisfied with the decision of the examiner regarding an appeal, the examinee may pursue an appeal with ACI according to the following order:
1. Sponsoring Group
 2. ACI Managing Director of Certification
 3. The Certification Appeals Committee [consisting of the Managing Director of Certification, the Chairman of the Certification Programs Committee, and the Chairman of Committee C602-GB]
 4. Committee C602-GB, EN Standards Certification
 5. Certification Programs Committee
- 5.3 Appeals submitted to ACI for consideration must be received, in writing, within sixty [60] days of the receipt of the examination at ACI Headquarters.

SECTION 6.0 SPONSORING GROUP CRITERIA

- 6.1 Groups desiring to conduct ACI Certification program(s) shall adhere to the current *Policy on Sponsoring Groups for Certification* (Annex 613.2-2).

SECTION 7.0 EXAMINER / SUPPLEMENTAL EXAMINER CRITERIA

- 7.1 To maintain access to the ACI examination materials, the examiner shall maintain approval from ACI and authorization from the Sponsoring Group.
- 7.2 Applicants must be selected by an approved Sponsoring Group and shall submit a current ACI Examiner Application to ACI through that same Sponsoring Group.
- 7.3 In order to be considered for examiner status, the applicant shall have assisted in the administration of at least two (2) ACI examination sessions (any program including written and performance components where applicable), performing to the satisfaction of the examiner of record, or: Satisfactorily participated in an ACI Staff led Orientation and Certification program session, and:
- A) Satisfy the following criteria
1. Be a registered professional engineer, or hold equivalent international credentials; and

2. Have been certified as an ACI EN Standards Concrete Compressive Strength Testing Technician; and
3. Have had at least two (2) years of verifiable experience in concrete construction, inspection or testing.

OR

B) Satisfy the following alternate criteria:

1. Be certified as an ACI EN Standards Concrete Compressive Strength Testing Technician at the time of application; and
2. Have had at least five (5) years of verifiable experience in ACI certification administration, concrete construction, inspection or testing; and
3. Have participated in at least four (4) ACI examination sessions as a proctor and/or supplemental examiner for any ACI certification program. This is in addition to the administration assistance, as stated above, but is permitted to be completed concurrently.

7.4 Examiners, supplemental examiners, examiners acting as supplemental examiners and proctors shall not conduct any portion of the examination for anyone with whom he/she is personally related.

7.5 Examiners/supplemental examiners shall not examine anyone on the performance examination who is employed in the same organization. Governmental or other organizations may petition ACI, in writing, and request a waiver of this restriction. ACI may grant waivers, on a case-by-case basis, only if it can be shown that the intent of the policy will be maintained.

7.6 Supplemental examiners shall be permitted to assist in conducting the performance examination, and may be authorized to conduct the performance examination without the direct supervision of an Examiner with prior approval of ACI Committee C602-GB.

7.7 Supplemental examiners shall satisfy the following requirements:

- A) Have recent experience in concrete testing;
- B) Be selected and adjudged qualified by the examiner or ACI Committee C602-GB;
- C) Be considered trustworthy and conscientious.
- D) Has been certified as an ACI EN Standards Concrete Compressive Strength Testing Technician or be an ACI approved examiner.
- E) Successfully complete the ACI Supplemental Examiner training module

7.8 Proctors shall be permitted to assist the examiner in conducting the written examination.

7.9 Proctors shall satisfy the following requirements:

- A) Be considered trustworthy and conscientious by the Examiner.
- B) Be selected by the Examiner.

- 7.10 The examiner shall be directly responsible for the following activities:
- A) Select the supplemental examiners and proctors, except in cases where the supplemental examiners are approved in advance by ACI Committee C602-GB;
 - B) Verify the qualifications of the supplemental examiners and proctors according to the criteria outlined in Section 7.4 through 7.9 of this policy;
 - C) Order examinations;
 - D) Verify the identity of each examinee, and ensure that the examinees are aware of the certification criteria;
 - E) Verify that the examinees have signed the release statement on the written and performance examinations prior to testing;
 - F) Verify that the performance evaluations were conducted by approved supplemental examiners, and co-sign the performance checklists where appropriate;
 - G) Enter the appropriate grade for the completed performance examination on the checklist report;
 - H) Ensure that all examinees have an opportunity to take a second trial on any failed procedure of the performance examination; and
 - I) Shall not define terms or interpret examination questions during the course of the written examination.
- 7.11 Examiners or supplemental examiners shall not observe more than one examinee conducting tests at any one time during the performance examination.
- 7.12 The examination sessions must be supervised constantly by the examiner, supplemental examiner(s) and/or proctor(s).

SECTION 8.0 ACI DUTIES AND RESPONSIBILITIES

- 8.1 ACI shall approve the Sponsoring Group.
- 8.2 ACI shall authorize the Sponsoring Group to conduct examining sessions for EN Standards Concrete Compressive Strength Testing Technician certification.
- 8.3 ACI shall approve the examiner.
- 8.4 ACI shall grade the written examinations and review the performance examination, and notify the examinee, examiner and the Sponsoring Group of the final results.
- 8.5 ACI shall authorize the issuance of certificates to examinees who have satisfied the certification requirements.
- 8.6 ACI shall certify the examinees who have satisfied the certification requirements.
- 8.7 ACI shall issue credentials to examinees who meet the certification requirements.
- 8.8 ACI shall keep all written exam scores confidential, unless authorized in writing by the examinee.

SECTION 9.0 RECERTIFICATION CRITERIA

- 9.1 Recertification as an EN Standards Concrete Compressive Strength Testing Technician requires successful completion of the then current certification requirements outlined in Sections 1.0, 3.0 and 4.0 of this policy.

End of Policy Text

**Job Task Analysis for ACI Certification of
EN Standards Concrete Compressive Strength Testing Technician**

RESOURCES:

EN 12390-1: 2021 Testing hardened concrete Part 1: Shape, dimensions and other requirements for specimens and moulds

EN 12390-3: 2019 Testing hardened concrete Part 3: Compressive strength of test specimens

EN 12390-7: 2019 Testing hardened concrete Part 7: Density of hardened concrete

EN 12390-1: 2021 Testing hardened concrete Part 1: Shape, dimensions and other requirements for specimens and moulds

- Understand the scope of the standard
- Know the definitions of nominal size and designated size
- Know the nominal sizes for cubes, cylinders and prisms
- Know the requirements for and perform dimensional measurements of test specimens
- Know the requirements for and perform checks of flatness, perpendicularity and straightness of test specimens
- Know the general requirements for moulds
- Know the tolerance requirements for test specimens
- Understand the measurement procedure for test specimens cast in calibrated moulds

EN 12390-3: 2019 Testing hardened concrete Part 3: Compressive strength of test specimens

- Understand the scope and principal of the standard
- Understand the apparatus required to perform tests
- Know the dimensional limitations of test specimens and applicable methods of adjustment
- Know and perform additional dimensional measurements for specimens outside of tolerances for designated size
- Know what to do with damaged or very poorly made specimens
- Know the time limit for testing specimens after removal from curing
- Know the temperature requirements of the test facility
- Know the ambient condition requirements for the test specimens
- Know and perform the procedure for positioning and centring specimens in the testing machine
- Know and perform the procedure for initial loading and its limits
- Know and perform the procedure for applying the test load at the correct loading rate
- Know and perform the procedures for applying the load to failure
- Know and perform the assessment of failure type
- Know and perform the calculation of test results, including the proper reporting of compressive strength
- Know which information is to be included on test reports

EN 12390-7: 2019 Testing hardened concrete Part 7: Density of hardened concrete

- Understand the scope of the standard
- Know the required apparatus for the test method
- Know the requirements for specimens to be tested
- Know and perform the methods for the determination of mass of a specimen
- Know and perform the methods for the determination of volume of a specimen
- Know and perform the required calculations, and the correct reporting of density
- Know the requirements of the test report

ANNEX 613.2-2

AMERICAN CONCRETE INSTITUTE

Policy on Sponsoring Groups for Certification

Approved by the ACI Board of Direction
March 21, 1991

Last revised by the ACI Certification Programs Committee
October 18, 2011

In developing certification exams for the concrete construction industry, the American Concrete Institute (ACI) has set forth minimum criteria by which an individual's proficiency is to be judged. Typically, ACI is not in a position to deliver certification exams directly to participants; therefore, it is necessary for ACI to have the ability to delegate this authority. However, if the need arises, ACI reserves the right to conduct exam sessions itself according to each program Policy.

In order to allow others to deliver its certification exams, ACI has adopted the "Sponsoring Group" concept. Sponsoring Groups act as agents of ACI in the delivery of ACI certification exams. Therefore, prior to being selected as an ACI Sponsoring Group, and for the duration of the period in which the group is authorized to act as a Sponsoring Group, such groups are subject to the following policies:

1. Sponsoring Groups shall be approved, in writing, by ACI's Certification Department (hereafter referred to as ACI) before they will be permitted to conduct an ACI¹ certification exam session. In all cases, approval of Sponsoring Groups shall be at the sole discretion of ACI.
2. In reviewing applications, ACI will consider, among other factors, the following:
 - A) The ability and willingness of the applicant to include in their constituency segments of the concrete construction industry impacted by the exams which they have applied to conduct. This includes individuals involved in the specification, production, design, construction, testing and inspection of concrete and concrete products. The applicant must establish a governance structure with representation appropriate to all of the exams for which the applicant has applied.

¹ For the purposes of this policy, references to "ACI certification" and "ACI certification program(s)" include only those administered solely by ACI (ACI programs). Programs with cosponsors are not directly addressed by this Policy.

ANNEX 613.2-2

Policy on Sponsoring Groups for Certification

- B) The interest, experience and technical expertise necessary to conduct exam sessions exhibited by the applicant and/or their certification governance structure.
 - C) The legitimate need for the applicant to conduct a specific ACI certification exam within their approved operational jurisdiction.
 - D) The primary objective of the applicant in applying for sponsorship, which must coincide with ACI's overall mission of improving the quality of concrete construction within the political, social, and cultural dynamics of the intended operational jurisdiction.
3. Sponsoring Groups are required to maintain a governance structure to oversee the delivery of ACI exams. The governance structure shall consist of a committee of at least three (3) individuals, each working for a different employer and each producing a different product or service related to the concrete construction industry. At all times, at least one (1) member of the committee shall be a member of ACI. Further, ACI shall be furnished with a complete and accurate listing of contact information for all committee members including names, employers, type of businesses, physical addresses, email addresses, and both office telephone and cell phone numbers as available.
 4. The certification committee shall obtain the services of ACI-approved examiners. The examiners shall operate under the direct supervision of the certification committee to conduct ACI certification exam sessions. Examiners are permitted to conduct ACI certification exam sessions only under the auspices of ACI or ACI-approved Sponsoring Groups; and they must comply with all ACI certification policies and procedures.
 5. At the time of approval, ACI shall assign Sponsoring Groups specific geographical areas within which they will have authority to conduct ACI certification exam sessions. This area is the approved operational jurisdiction for the Sponsoring Group.
 6. ACI shall approve each Sponsoring Group on a calendar year basis for a period not to exceed two (2) years. Prior to the conclusion of this period, all groups shall reapply to ACI for approval to continue to act as an ACI Sponsoring Group.
 7. In the U.S., in areas where no Sponsoring Group is actively administering a specific ACI examination, the local ACI chapter (not a student chapter) shall have first rights to administer that specific exam. International sponsorship for any ACI examination will be assessed on a case-by-case basis.

ANNEX 613.2-2

Policy on Sponsoring Groups for Certification

8. If an existing Sponsoring Group or ACI Chapter is solicited to administer an examination and participation is declined, or if a sponsor does not request an examination upon initial availability from ACI, or if a requested examination is not administered within two years following approval, administration of said examination may become available to other potential sponsors.
9. If more than one applicant wishes to sponsor an ACI certification exam in the same operational jurisdiction and there is documented need for more than one group to conduct the examination in that jurisdiction or portion thereof, a system of coordination between those groups shall be established. A description of this system shall be considered along with any new Sponsoring Group application and must be included in the governance system for any existing Sponsoring Group. In all cases, ACI reserves the right, in its sole discretion, to select a delivery system that in its judgment is best able to serve the interests of ACI.
10. Applicants wishing to sponsor ACI certification examinations on a "national" or "regional" basis will, in appropriate circumstances, be approved to conduct exams under specific conditions at the discretion of ACI.
11. Approved Sponsoring Groups are responsible for:
 - A) Maintaining control over the administration of ACI Certification exams offered within their operational jurisdiction. This includes, but is not limited to, maintaining control over the ethical and professional integrity of every sponsored examination session and providing ongoing oversight of exam session coordinators, examiners, and other exam delivery personnel.
 - B) Conducting a sufficient number of exam sessions and providing equitable access to those exam sessions for all individuals seeking ACI Certification within the group's operational jurisdiction.
 - C) Conducting all ACI exams in a manner which complies with the intent of ACI's policies and procedures governing certification.
 - D) Formulating, publishing, and enforcing consistent and equitable pricing for ACI Certification exams offered by the Sponsoring Group within their operational jurisdiction.
 - E) Developing and implementing participant registration processes that satisfy the policy requirements of each exam offered by the Sponsoring Group and verifying that each participant has met the eligibility requirements of the program before being allowed to complete an ACI exam.

ANNEX 613.2-2

Policy on Sponsoring Groups for Certification

- F) Collecting exam fees from participants, paying materials invoices to ACI within 30 days of receipt, and distributing compensation to examiners and other program delivery personnel as warranted.
 - G) Developing a program delivery process that establishes separation between the education/training and testing divisions of the Sponsoring Group.
12. ACI has the right to revoke a Sponsoring Group's authority to conduct an ACI certification exam at any time, with or without cause, and with or without notice.
 13. Appeals resulting from the denial or revocation of Sponsoring Group status will be reviewed by ACI Staff for determination of appropriate action on a case-by-case basis.
 14. This policy shall become effective sixty (60) days after its approval by the ACI Certification Programs Committee, and shall render all previous Policy versions null and void. Sponsoring Groups shall be notified of this new policy in writing within thirty (30) days after it is approved by the ACI Certification Programs Committee.
 15. The Certification Programs Committee shall review, revise as necessary, and reapprove this Policy at intervals not exceeding two years in length.