

Leverage Your Hands-On Shotcrete Experience

BECOME AN ACI-CERTIFIED SHOTCRETE INSPECTOR

By Oscar Duckworth

There is an old saying with engineers and inspectors that you cannot have too many credentials. While that is true for many careers, it is underused in shotcreting. Knowledge and experience of successful concrete construction are the greatest career assets for those who work with shotcrete placement. Shotcreters know how the work is performed, and can immediately recognize shortcuts, hidden defects, and other red flags. So, why not leverage valuable experience by acquiring an ACI-Certified Shotcrete Inspector credential?

Transforming or supplementing a successful field career into an inspector role is a natural and rewarding progression for experienced workers of every profession. On typical projects, inspectors and other construction monitoring personnel are required by the owner and engineer of record. The inspector is responsible for observing the work and documenting that it is performed in accordance with the project specifications.

There is an acute shortage of ACI-Certified Shotcrete Inspectors in the United States. In fact, in many regions, shotcrete inspectors often travel significant distances to meet demand.

The ACI Shotcrete Inspector Certification program was launched in 2019 to help satisfy the strong demand for knowledgeable on-site shotcrete inspection personnel, and for current concrete inspectors who wish to obtain ACI Shotcrete Inspector credentials. Since the program's inception, shotcrete workers, designers, project superintendents, and others from many different shotcrete backgrounds have obtained ACI-Certified Shotcrete Inspector credentials, significantly benefiting the industry.

Inspectors want to help provide a quality product; however, disagreements with inspection personnel can arise about the use of shotcrete placement rather than traditional concrete casting methods.

Unfortunately, determinations of whether shotcrete placement is performed in strict accordance with the project specifications often appear to be inconsistent between inspectors. In many instances, inspection personnel draw conclusions from common misconceptions or from their experience with cast-in-place work. Disagreements regarding surface preparations, reinforcement spacing, material rejections, and cold joints are common.

Possessing an ACI-Shotcrete Inspector credential

can be useful when differences of opinion arise, or when compliance or noncompliance issues are discussed. An ACI Shotcrete Inspector credential validates that the inspector's shotcrete-specific concrete knowledge is current and has been verified through an approved testing criterion. ACI Shotcrete Inspectors are qualified to perform shotcrete placement monitoring and verification that work was performed according to the project specifications and ACI SPEC 506.2-13(18), "Specification for Shotcrete."¹

While ACI Certification may seem primarily beneficial to existing concrete construction inspectors, it has many benefits to builders who are subcontracting shotcrete

CP-61PACK

SHOTCRETE INSPECTOR REFERENCE PACKAGE

This binder pack includes program information, Job Task Analysis, a sample exam, and reprints of ACI and ASA technical resource materials covered by the program. Documents include:

- ACI 305R-10, "Guide to Hot Weather Concreting"
- ACI 305.1-14, "Specification for Hot Weather Concreting"
- ACI 306R-16, "Guide to Cold Weather Concreting"
- ACI 306.1-90(02), "Standard Specification for Cold Weather Concreting"
- ACI 506R-16, "Guide to Shotcrete"
- ACI 506.1R-08, "Guide to Fiber-Reinforced Shotcrete"
- ACI 506.2-13, "Specification for Shotcrete"
- ACI 506.4R-94(04), "Guide for the Evaluation of Shotcrete"
- ACI 506.6T-17, "Visual Shotcrete Core Quality Evaluation"
- ACI CCS-4(08), "Shotcrete for the Craftsman"
- ASA, "Safety Guidelines for Shotcrete"



placements on their projects, and even to shotcrete contractors. The benefits include:

- Visual recognition of quality shotcrete during shotcrete placement;
- Knowledge of how to communicate what is involved in quality shotcrete placement to the project team (project owners, engineers, and less experienced inspectors);
- Knowledge of the appropriate testing measures to verify the quality of the in-place concrete;
- Knowledge of what curing and protection methods are appropriate for a project; and
- Possession of an internationally recognized credential that backs up experience against concerns over specification requirements versus performance.

GETTING THE NECESSARY CREDENTIALS

Becoming an ACI-Certified Shotcrete Inspector requires more than knowledge about shotcrete. General concrete inspection knowledge is also required. While practical trade experience counts toward the certification qualifications, other prerequisites for becoming an ACI Shotcrete Inspector include:

- The successful completion of an open book written examination; and
- The successful completion of an ACI Concrete Field-Testing Technician—Grade I (CFTT-I) written exam (Current certification or successfully completed CFTT-I written exam within 1 year of a successfully completed Shotcrete Inspector written exam).

The ACI Shotcrete Inspector certification requires 3 years of satisfactory work experience in at least one of the following areas:

- Testing, inspection, and quality control of shotcrete;
- Supervision of shotcrete construction work; or
- Design of shotcreted structures.

Demonstration of satisfactory work experience may also be shown through attendance at the American Shotcrete Association (ASA) “Quality Shotcrete, Know It When You See It” full-day seminar, which counts as the equivalent of 1 year of field experience.

Gaining shotcrete experience on the job and through education is valuable. Completing the certification process validates shotcrete placement expertise to those in the concrete construction industry.

When the credential is obtained, it can be listed in a LinkedIn profile to easily allow owners, engineers, or builders to find the profile when searching for an ACI-Certified Shotcrete Inspector.



For more information, visit
www.concrete.org/certification.



ACI Shotcrete Inspectors help ensure quality shotcrete placement

REFERENCES

1. ACI Committee 506, “Specification for Shotcrete (ACI SPEC-506.2-13) (Reapproved 2018),” American Concrete Institute, Farmington Hills, MI, 2013, 12 pp.



Oscar Duckworth, FACI, is an ACI-Certified Shotcreter with over 44,000 hours of nozzle time. He has worked as a shotcreter on over 2500 projects. Duckworth is currently an ASA/ACI Examiner for the wet- and dry-mix processes. A member of the American Shotcrete Association (ASA) and ASA Past President, he has served on the

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