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ERRATA
SP-15 (99)
Specifications for Structural Concrete (ACI 301-99)
with selected ACI and ASTM references

A page was missing between p. 447 and 448 of this publication. Please insert the following page after p. 447:

13.2.1 Reading of revolution counter at the first addition of water.

13.2.2 Type and brand, and amount of cement,

13.2.3 Type and brand, and amount of admixtures,

13.2.4 Information necessary to calculate the total mixing water added by the truck operator from the mixer tank,

13.2.5 Maximum size of aggregate,

13.2.7 Ingredients certified as being previously approved, and

13.2.8 Signature or initials of ready-mix representative.

14. Plant Inspection

14.1 The manufacturer shall afford the inspector all reasonable access, without charge, for making necessary checks of the production facilities and for securing necessary samples to determine if the concrete is being produced in accordance with this specification. All tests and inspection shall be so conducted as not to interfere unnecessarily with the manufacture and delivery of the concrete.

15. Practices, Test Methods, and Reporting

15.1 Test ready-mixed concrete in accordance with the following methods:

15.1.1 *Compression Test Specimens*— Practice C 31/C 31M, using standard moist curing in accordance with the applicable provisions of Practice C 31/C 31M.

15.1.2 *Compression Tests*—Test method C 39.

15.1.3 *Yield, Mass per Cubic Foot*—Test Method C 138.

15.1.4 *Air Content*—Test Method C 138; Test Method C 173 or Test Method C 231.

15.1.5 *Slump*—Test Method C 143/C 143 M

15.1.6 *Sampling Fresh Concrete*—Practice C 172.

15.1.7 *Temperature*—Test Method C 1064.

15.2 The testing laboratory performing acceptance tests of concrete shall meet the requirements of Practice C 1077.

15.3 Laboratory reports of concrete test results used to determine compliance with this specification shall include a statement that all tests performed by the laboratory or its agents were in accordance with the applicable test methods or shall note all known deviations from the prescribed procedures (Note 17). The reports shall also list any part of the test methods not performed by the laboratory.

Note 17—Deviation from standard test methods may adversely affect test results.

Note 18—Deviation from standard moisture and temperature curing conditions is often a reason for low strength test results. Such deviations may invalidate the use of such test results as a basis for rejection of the concrete.

16. Sampling and Testing Fresh Concrete

16.1 The contractor shall afford the inspector all reasonable access and assistance, without charge, for the procurement of samples of fresh concrete at time of placement to determine conformance of it to this specification.

16.2 Tests of concrete required to determine compliance with this specification shall be made by a certified ACI Concrete Field Testing Technician, Grade I or equivalent. Equivalent personnel certification programs shall include both written and performance examination as outlined in ACI CP-1.

16.3 Samples of concrete shall be obtained in accordance with Practice C 172, except when taken to determine uniformity of slump within any one batch or load of concrete (10.4, 11.3.3, 11.5.1, and 12.4).

16.4 Slump, air content, density, and temperature tests shall be made at the time of placement at the option of the inspector as often as it is necessary for control.

checks. In addition, these tests shall be made when specified and always when strength specimens are made.

16.5 Strength tests as well as slump, temperature, density, and air content tests shall generally be made with a frequency of not less than one test for each 150yd³ (115 m³). Each test shall be made from a separate batch. On each day concrete is delivered, at least one strength test shall be made for each class of concrete.

16.6 If the measured slump or air content falls outside the specified limits, a check test shall be made immediately on another portion of the same sample. In the event of a second failure, the concrete shall be considered to have failed the requirements of the specification.

17. Strength

17.1 When strength is used as a basis for acceptance of concrete, standard specimens shall be made in accordance to Practice C 31/C 31M. the specimens shall be cured under standard moisture and temperature conditions in accordance with the applicable provisions of Practice C 31/C 31M. The technician performing the strength test shall be certified as an technician performing the strength test shall be certified as an ACI Concrete Laboratory Testing Technician—Grade I or II or by an equivalent written and performance test program.

17.2 For a strength test, at least two standard test specimens shall be made from a composite sample

secured as required in Section 16. A test shall be the average of the strengths of the specimens tested at the age specified in 4.2.1.1 or 4.4.1.1 (Note 19). If a specimen shows definite evidence other than low strength, of improper sampling, molding, handling, curing, or testing, it shall be discarded and the strength of the remaining cylinder shall then be considered the test result.

Note 19—Additional tests may be made at other ages to obtain information for determining form removal time or when a structure may be put in service. Specimens for such tests are cured according to the section on Field Curing in Practice C 31/C 31M.

17.3 The representative of the purchaser shall ascertain and record the delivery-ticket number for the concrete and the exact location in the work at which each load represented by a strength test is deposited.

17.4 To conform to the requirements of this specification, strength tests representing each class of concrete must meet the following two requirements (Note 20):

17.4.1 The average of any three consecutive strength tests shall be equal to, or greater than, the specified strength, f'_c , and

17.4.2 No individual strength test shall be more than 500 psi [3.5 MPa] below the specified strength, f'_c .

Note 20—Due to variations in materials, operations and testing, the