8.15.2.1.3 Bearing Stress

The bearing stress, fb, on the loaded area shall not exceed 0.30. When the supporting surface is sloped or stepped, A2 may be taken as the area of the lower base.

8.15.2.1.4 Permissible Temperature Expansion

ACI Committee 363, High-Strength Concrete, reports that the coefficient of thermal expansion can be taken as 0.000006 per degree F. An attempt should be made to find more information on the coefficient of thermal expansion and its effect on expansion of concrete. Action: Revisions to tables 3 and 4 to include 56 days are proposed.

8.15.2.1.5 Revisions to Section 8.1

Test age: The test age for concrete should be defined in section 8.1. The option of rapid curing is proposed. Action: Revisions to sections 4.1, 4.4, 10.1.1, and 13.1.6 to include other materials and a test age of 56 days are proposed.

8.15.2.2 Curing Procedures

Curing is required to ensure the proper setting and hardening of concrete. Grout, lightweight aggregate concrete, and other special concrete compositions may require additional curing techniques. Consider the use of admixtures to control the rate of heat generation and hydration. See standard specifications for the curing of concrete.

8.15.2.3 Admixture Use

Admixtures can be used to control the rate of heat generation and hydration of concrete. See standard specifications for the curing of concrete.

8.15.2.4 Mortar Expansion

Mortar expansion is an important factor in the design of concrete structures. This test method describes the measurement of the expansion of mortar due to internal stresses. A combined aggregate grading that includes both the fine and coarse aggregates is preferred. This test is important for the proper proportioning of the concrete mixture.

8.15.2.5 Performance-Based Specifications

Performance-based specifications are gaining in popularity in the concrete industry. The emphasis is on the desired concrete properties, and the mix proportioning is based on these properties. This test method tests the concrete for its performance in service rather than just its material properties. Action: Revisions to the aggregate retained on each sieve size would be appropriate for HPC. Improved gradings enable the use of lightweight aggregate, which is beneficial for HPC.

14. Nomenclature and Definitions

15. Design Method

16. Summary of International Results

17. Project History

18. Distribution Statement

19. Acknowledgements


21. Subject Index