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Report on Internally Cured Concrete Using Prewetted Absorptive Lightweight Aggregate

Reported by ACI Committee 308
and ACI Committee 213



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Reported by ACI Committee 308 and ACI Committee 213

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This report introduces the concepts of and describes the process benefit and applications for using prewetted lightweight aggregate to increase cement hydration in internally cured concrete. It also describes mixture proportioning and absorptive material selection and discusses the benefits relating to sustainability. The materials, processes, quality control measures, and inspections described should be tested, monitored, or performed as applicable only by individuals holding the appropriate ACI certifications or equivalent.

Keywords: absorption; curing; desorption; durability; high-performance concrete; hydration; internal curing; internally cured concrete; lightweight aggregate; outside curing; permeability; saturated-surface-dry; shrinkage; strength; supplementary cementitious materials; water movement.

CONTENTS

CHAPTER 1—INTRODUCTION AND SCOPE, p. 2

- 1.1—Introduction, p. 2
- 1.2—Scope, p. 2

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CHAPTER 2—NOTATION AND DEFINITIONS, p. 2

- 2.1—Notation, p. 2
- 2.2—Definitions, p. 2

CHAPTER 3—PROCESS, p. 2

- 3.1—General, p. 2
- 3.2—Justification, p. 3
- 3.3—Water movement, p. 3
- 3.4—Autogenous shrinkage and self-desiccation, p. 3
- 3.5—Mechanism of internal curing, p. 3
- 3.6—Water movement during hydration observed using X-ray microtomography, p. 4

CHAPTER 4—INTERNALLY CURED CONCRETE (ICC): EFFECTS, BENEFITS, AND APPLICATIONS, p. 4

- 4.1—Early-age shrinkage reduction, p. 4
- 4.2—Crack reduction, p. 5
- 4.3—Compressive strength, p. 5
- 4.4—Overdosing prewetted lightweight aggregate (PLA), p. 6
- 4.5—Flexural strength, p. 6
- 4.6—Mitigation of warping and dimensional stability, p. 6
- 4.7—Modulus of elasticity, p. 6
- 4.8—Permeability and resistance to deicing chemicals, p. 7
- 4.9—Creep, p. 7
- 4.10—Durability, p. 8

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