

IN-LB

Inch-Pound Units

SI

International System of Units

Heavyweight Concrete: Measuring, Mixing, Transporting, and Placing

Reported by ACI Committee 304

ACI 304.3R-20



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Heavyweight Concrete: Measuring, Mixing, Transporting, and Placing

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This document presents recommended methods and procedures for measuring, mixing, transporting, and placing heavyweight concretes that are used principally for radiation shielding in nuclear construction. Also covered are recommendations on cement, heavyweight aggregates, water, and admixtures. Mixture proportioning of heavyweight concrete is discussed. Mixing equipment, form construction, placing procedures, and methods of consolidation are described. Quality control, inspection, and testing are emphasized, and a list of references is included. Preplaced heavyweight concrete is not discussed in this version of 304.3R. It is covered in the 2004 version of the document.

Keywords: admixtures; aggregates; barite; concrete construction; consolidation; construction equipment; conveyance; density (mass/volume); formwork (construction); grout; heavyweight aggregates; heavyweight concretes; hematite; ilmenite; limonite; magnetite; mass concrete; materials handling; mixture proportioning; mixing; placing; quality control; radiation shielding; segregation; ultra-heavyweight concrete.

CONTENTS

CHAPTER 1—INTRODUCTION, p. 2

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

CHAPTER 2—MATERIALS, p. 2

- 2.1—Cement, p. 2
- 2.2—Aggregates, p. 2
- 2.3—Mixing water, p. 3
- 2.4—Admixtures, p. 3
- 2.5—Heavyweight mortar and grouts, p. 4

CHAPTER 3—CONCRETE CHARACTERISTICS, p. 4

- 3.1—Physical properties, p. 4
- 3.2—Mixture proportioning, p. 4

CHAPTER 4—EQUIPMENT, p. 4

CHAPTER 5—FORMWORK, p. 5

CHAPTER 6—PLACEMENT, p. 6

CHAPTER 7—QUALITY CONTROL, p. 6

- 7.1—Samples and tests, p. 6

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