Record Nr. UNINA9911006870603321 Autore Chandra S (Satish) **Titolo** Lightweight aggregate concrete: science, technology, and applications // by Satish Chandra and Leif Berntsson Norwich, N.J., : Noves Publications, c2003 Pubbl/distr/stampa **ISBN** 1-282-01116-2 9786612011160 0-8155-1820-X Descrizione fisica 1 online resource (451 p.) Altri autori (Persone) BerntssonLeif Disciplina 624.1/834 Soggetti Lightweight concrete Aggregates (Building materials) Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Description based upon print version of record. Nota di bibliografia Includes bibliographical references and index. Nota di contenuto Front Cover; Lightweight Aggregate Concrete: Science, Technology, and Applications; Copyright Page; Contents; Introduction; Chapter 1. Historical Background of Lightweight Aggregate Concrete; 1.0 INTRODUCTION; 2.0 LIGHTWEIGHT AGGREGATES (LWA); 3.0 CONCLUDING REMARKS; REFERENCES; Chapter 2. Production of Lightweight Aggregates and Its Properties; 1.0 INTRODUCTION; 2.0 INDUSTRIAL KILNS; 3.0 NATURAL LIGHTWEIGHT AGGREGATES; 4.0 PRODUCTION TECHNIQUES; 5.0 CONCLUDING REMARKS; REFERENCES; Chapter 3. Supplementary Cementing Materials; 1.0 INTRODUCTION; 2.0 HIGH PERFORMANCE CEMENT 3.0 MINERAL ADMIXTURES4.0 LWAC WITH A MINERAL ADMIXTURE; 5.0 SUPERPLASTICIZERS (SP): 6.0 CONCLUDING REMARKS: REFERENCES: Chapter 4. Mix Proportioning; 1.0 INTRODUCTION; 2.0 MIX PROPORTIONING OF NO-FINES LWAC; 3.0 MIX PROPORTIONING OF STRUCTURAL LIGHTWEIGHT AGGREGATE CONCRETE; 4.0 CONCLUDING REMARKS; REFERENCES; Chapter 5. Production Techniques; 1.0 INTRODUCTION: 2.0 LIGHTWEIGHT AGGREGATE AND ITS SUPPLY: 3.0 REMARKS ON MIX DESIGN: 4.0 BATCHING: 5.0 TRANSPORTATION AND

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Sommario/riassunto

In spite of the increasing use and demand for lightweight aggregate concrete (LWAC), there is still a lack of adequate explanations to understand the mechanisms responsible for the strength and durability properties of LWAC. This book is written to give an overall picture of LWAC, from the historical background, aggregate production, proportioning and production of concrete, to applications in structures. Physical properties and chemical durability are described in detail. The physical properties include density, strength, shrinkage, and elasticity. Chemical durability includes resistance to a