Record Nr. UNINA9910779245703321 Autore Sakai K (Koji) Titolo The sustainable use of concrete / / Koji Sakai, Takafumi Noguchi Pubbl/distr/stampa Boca Raton, Fla.:,: CRC Press,, 2013 **ISBN** 1-136-72730-2 0-429-21294-1 1-136-72731-0 0-203-81717-6 Descrizione fisica 1 online resource (185 p.) Classificazione TEC010000TEC063000SCI026000 Altri autori (Persone) NoguchiTakafumi Disciplina 624.1/834 Soggetti Concrete Concrete construction Sustainable construction Concrete - Environmental aspects 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. Nota di contenuto Front Cover; Contents; Preface; Chapter 1 - Introduction; Chapter 2 -Sustainability: Chapter 3 - Sustainability in Concrete and Construction: Chapter 4 - Evaluation Systems of Sustainability: Chapter 5 -Technologies for Concrete Sustainability; Chapter 6 - Sustainable Concrete Technologies: Case Studies: Chapter 7 - Future Perspectives: **Back Cover** Preface The construction industry is very conservative. This can be seen Sommario/riassunto as deriving from the special nature of its work which is creating the social and economic infrastructures required by each particular age in a safe way. Architecture is to some extent ahead of its time in the design of buildings but also reflects the inclinations of clients. In other words, the basic activity of the construction industry has been to reliably translate social needs into material form. Naturally, with the growing sophistication of requirements, construction technology has developed and many breakthroughs have been achieved to make the impossible possible, but this process has also been marked by many failures. The

construction industry can be said to have built its technology systems through a process of experience engineering. The construction industry

exhibits a high degree of locality. Structures have generally been built by local people using local materials. Globalization has promoted internationalization in the construction industry as elsewhere, but the basics of construction systems have remained unchanged. What makes this possible is the wide use of concrete as a construction material. Its primary component materials are aggregate, cement, and water, with aggregate constituting approximately 70% of the total volume. The Earth's crust is composed of rocks that are the raw materials for aggregate. Water, when seawater is included, is the most commonly available globally circulating substance on Earth. In the case of cement, the raw materials are limestone and clay, both of which are also available in abundance--