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Descrizione fisica	1 online resource (475 pages)
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Disciplina	693.2
Soggetti	Buildings - Design and construction Building materials Environmental engineering Civil engineering Building Construction and Design Building Materials Environmental Civil Engineering
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Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Introduction to Earthen structures -- Soils -- Soil stabilisation -- Stabilised earth block production -- Characteristics of stabilised compressed earth blocks -- Mortars for stabilised compressed earth block masonry -- Stabilised compressed earth block masonry -- Design of cement stabilised CEB masonry -- Geopolymer or alkali activated stabilised earth bricks -- Compressed earth blocks using non-organic solid wastes -- Introduction to rammed earth -- Compressive strength of rammed earth -- Stress-strain characteristics of cement stabilised rammed earth -- Behaviour of rammed earth under tension and shear -- Structural design of rammed earth walls -- Status of clay minerals in the stabilised earth materials -- Energy and carbon emissions in stabilised earth products -- Sustainability of construction materials, green buildings and case studies.
Sommario/riassunto	The book focuses on low carbon construction materials such as stabilised compressed earth blocks (CEB’s) and rammed earth (RE). The

content has been divided into four broad themes which includes an introduction to earth construction & stabilised earth, stabilised compressed earth blocks and masonry, stabilised rammed earth, and energy, carbon emissions, sustainability and case studies. It provides basic introduction to earthen materials and earthen structures, particularly with reference to the contemporary work on stabilised earth products for structural applications in buildings. The illustrations in the form of graphs, tables and photographs help the reader to get a grip over the CEB and RE construction. The book illustrates many case studies and examples of CEB and RE buildings. The knowledge on structural characteristics of CEB and RE especially with reference to the durability of such earthen products, and the structural design aspects is uniquely dealt. The embodied energy, embodied carbon, and the impact on construction sector touching upon sustainability of buildings is another unique feature of the book. This volume will be a useful guide for the research community, teachers, engineers, architects, building professionals, practicing engineers, students and individuals aspiring to build low carbon and sustainable buildings.