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Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Chapter 1: Stability analysis method of flat rod systems, based on forces approximations -- Chapter 2 : Dynamic analysis of an elastic plate resting on a nonlinear fractional-order viscoelastic Pasternak foundation and subjected to moving load -- Chapter 3: Vibrations of a constructively nonlinear system with one-way connections -- Chapter 5: Study of the stress-strain state of short hollow core slabs depending on the width -- Chapter 6: Operation analysis of the main arch-cable-stayed systems when operating under unevenly distributed and asymmetrically working load -- Chapter 7: Development of flexible joint for beam-to-column abutment -- Chapter 8: Dynamic finite element analysis of plane frame with nonlinear multi freedom constraints subjected to harmonic load using Penalty function method -- Chapter 9: Influence of the chemical and mineralogical composition of dolomites of various deposits on the properties of MOC on its base

-- Chapter 10: Filling of epoxy polymers as a factor of obtaining a multi-component composition with improved strength properties -- Chapter 11: Binding agents of autoclaved hardening based on metallurgical slags -- Chapter 12: Prospects for the use of fly ash from a thermal power plant of the Kaliningrad region in the construction industry -- Chapter 13: Influence of the quantity and time of hardening ash of thermal power plants formation of the structure and properties of cement stone -- Chapter 14: The study of the stress state in girders braced with carbon fiber -- Chapter 15: Getting gypsum mixes based on construction waste -- Chapter 16: Using Linear Programming for Builder Brigades Optimization -- Chapter 17: Magnesium oxide mixture technology for construction printer -- Chapter 18: Financing housing construction in the Russian Federation using escrow accounts -- Chapter 19: Geothermal power supply of buildings in harsh climatic conditions -- Chapter 20: Improving the methodology for predicting the destruction of the heat supply system in an accident -- Chapter 21: Experimental Study of Deformation of Soil Berms Retaining Pit Fence.

Sommario/riassunto

This book highlights recent findings in civil and environmental engineering and urban planning, and provides an overview of the state of the art in these fields, mainly in Russia and Eastern Europe. A broad range of topics and issues in modern engineering are discussed, including construction, buildings and structures, advanced materials, innovative technology, methods and techniques in civil engineering, heating, gas supply, water supply and sewerage, foundation engineering, BIM, structural reliability, durability and monitoring, special and unique structures construction (bridge, tunnel, road, railway engineering), design and construction of hydraulic structures, concrete engineering, urban regeneration and sustainable development, urban transport system, engineering structure safety and disaster prevention, water resources engineering, water and wastewater treatment, recycling and reuse of wastewater, etc. The volume gathers selected papers from the 5th International Conference on Construction, Architecture and Technosphere Safety (ICCATS), held in Sochi, Russia in September 2021. The authors are experts in various fields of engineering, and all papers have been carefully reviewed.