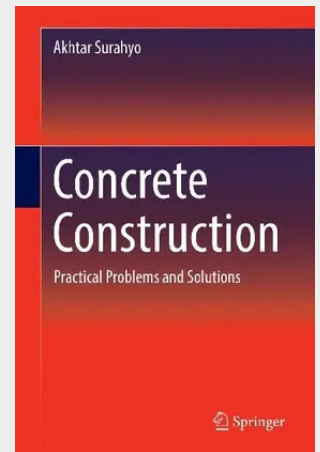


Concrete Construction

Practical Problems and Solutions

This book is a thorough and comprehensive update of the 2002 edition, that incorporates detailed references to the Canadian, American, and British (European) standards, contextualized by the author based on over 30 years of construction experience. In addition to updates to the core text, many new topics are presented in the second edition, including a chapter discussing the methods for achieving quality control and ensuring quality assurance in concrete construction. The book consists of two parts. The first part provides basic information about normal concrete, its grades used on sites and various kinds of modified concretes such as fiber- reinforced concrete, sulphur concrete, roller compacted concrete, high performance concrete, ultra- high performance concrete, and flowing concrete. It further addresses physical properties of concrete and various types of Portland cement, blended cements, admixtures, additives including properties of aggregates and their influence. The second part of the book highlights the principal causes of concrete deterioration along with protective measures, resulting from incorrect selection of constituent materials, poor construction methods, external factors, chemical attack, corrosion problems, hot and cold weather effects, and the various errors in designing and detailing. Featuring an extensive bibliography of the highly adopted standards as well as manuals and journals critical to the construction industry at the end of each chapter, the volume offers readers an advanced understanding of the theory and practical application of concrete technology and international standards in North America and Britain. - Addresses concrete technology as well as concrete construction practices, meeting national and international standards; - Maximizes readers' understanding of the principal causes of concrete deterioration along with protective measures; - Facilitates readers' grasp of different nomenclature used for the same materials in different parts of the world; - Features suitable tables, charts, and diagrams that illustrate and organize useful information; - Explains sustainable concrete doctrine and how to achieve it meeting green concrete / building requirements; - Provides a glossary, conversion factors, and examples of concrete mix design.

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