

## Concrete Mix Design, Quality Control and Specification

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### Abstrak

The nature of concrete is rapidly changing, and with it, there are rising concerns. Thoroughly revised and updated, this fourth edition of Concrete Mix Design, Quality Control and Specification addresses current industry practices that provide inadequate durability and fail to eliminate problems with underperforming new concrete and defective testing.

Many specifications now require additional criteria in an attempt to improve durability or other properties. This book discusses the trend towards adding performance requirements to existing prescriptive specifications. It also explores the matter of prescription versus performance specification and especially the specification of non-strength-related performance such as durability.

### What's new in the Fourth Edition:

Examines water-to-cement ratio as a declining criterion of quality and durability

Discusses the diminishing availability of suitable natural sands and growing industry concerns regarding the environmental impact of their use

Considers advances in concrete admixtures and their ever-increasing use

Advocates reliability of testing as a vital feature of the shift from prescriptive to performance specifications

Addresses cement replacement materials as they relate to greenhouse gas and sustainability

Concrete Mix Design, Quality Control and Specification explores producing, designing, controlling, or specifying concrete, and addresses issues related with sustainability and the impact of new concrete materials such as ready mixed geopolymers, magnesium oxide, and calcium carbonate. The text is an ideal resource for concrete technologists, producers and specifiers, and contractors on large projects