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Book review

Concrete for the Modern Age: Developments in Materials and Processes

A. Badr, C. Fentiman, M. Grantham and R. Manghabai (eds).
Whittles Publishing, Dunbeath, UK, 2017, ISBN 978-184995-372-6,
£110·99 (hardback), 507 pp.

These are the proceedings of an Institute of Concrete Technology (ICT) conference held in Oman in 2017. It comprises the opening session keynote presentation and seven sets of articles on the conference topics. Edited by the four members of the organizing committee, with the support of a large international scientific and technical committee, it integrally presents the written contributions of the conference participants.

The overall subject of the proceedings is 'concrete for the modern age', and it brings together international contributions to the advancement of concrete technology in terms of both materials and processes. It is therefore an interesting contribution by practitioners and researchers in this area. There are 38 articles (plus the opening keynote presentation) in all.

The first set of articles concerns hydration and admixtures. Comprising one keynote presentation and four articles, this section is focused mostly on the presentation of advancements concerning concrete admixtures and their effect on concrete properties, namely hydration/internal curing, flowability and durability. The second topic is 'application related' and includes one keynote presentation followed by six further articles focused on miscellaneous subjects such as three-dimensional printing, effects of impact loads and fire, maturity and various geotechnical applications.

The next topic concerns durability in general. With one keynote presentation and six articles, this deals with specifications, self-healing, leaching, fatigue and deterioration under specific circumstances. The following topic covers special cement and supplementary materials. One keynote presentation and four articles deal with various uncommon components of cement/concrete and their effects on concrete performance. The next topic, which comprises two articles only, focuses on sustainability and includes one conceptual work and another of a more practical nature.

The penultimate topic, concerning fibre-reinforced concrete, comprises six articles dealing with the structural and shrinkage-related behaviour of this type of concrete. Finally, the last topic on durable construction in the Middle East comprises one keynote presentation and five articles describing case studies in this geographical region.

Each section is enhanced by ample colour figures and tabulated data. Presentation is of a high quality and is comprehensive.

All in all, these proceedings present a wide-scope view of possible developments of concrete in the near future and will be of use to analytical concrete technologists and practicing engineers as well as consultants and researchers.

Jorge de Brito