

Book reviews

THE PREMIXING METHOD—PRINCIPLE, DESIGN AND CONSTRUCTION.

Edited by the Coastal Development Institute of Technology, Tokyo, Japan. A. A. Balkema, 2001. ISBN 90 580 9547 9, €59.00 140 pp.

This publication is essentially an English translation of the Japanese technical guidelines for the premix method, which were published in 1998. The premix method involves the *ex situ* mixing of sands with a cement-type stabiliser using a variety of mixing methods, depending on the nature of the soil to be treated. The process may be applied in a number of situations with the aim of reducing land reclamation programme times, increasing resistance to liquefaction, and overall strength improvement of the material.

The book is divided into six chapters: an outline of the method, factors influencing the increase in strength, engineering properties of treated soil, execution examples, design methods and installation methods, and verification. The five case studies presented represent over 1.25 million m³ of treated soil for liquefaction prevention, improved bearing capacity, or reduction of earth pressure on retaining structures.

This publication is a concise guide to the whole premix process, from conception through to verification of the final product, and represents a good reference document.

N. WHARMBY

GEOTECHNICAL ENGINEERING: MEETING SOCIETY'S NEEDS.

K. K. S. Ho and K. S. Li (eds). A. A. Balkema, 2001. Volume 1: ISBN 90 5809 250 X. Volume 2: ISBN 90 5809 251 8. Volume 3: ISBN 90 5809 261 5, €365, 400 pp.

This publication represents the proceedings of the 14th South-East Asian Geotechnical Conference in Hong Kong, in December 2001, and the associated workshop on rain-induced landslides. Most of the conference material understandably relates research work, case histories and views for that geographical region. However, there are a number of papers from other parts of the world, and many of the paper have worldwide relevance. The publication covers the six sessions of the conference.

Managing risk in the interests of public safety (Session 1) covers risk assessment, management and risk-based decision-making for landslides, geotechnical structures and liquefaction.

Environmental geotechnics (Session 2) contains a number of papers on the subject of landfill and landfill sites, with regard to planning, containment and development of such sites, including an offshore landfill project in Singapore.

The value of geotechnics in construction (Session 3) presents a large number of case studies covering a wide variety of geotechnical processes such as diaphragm walling, piling, jet grouting and tunnelling, as well as land reclamation.

Theoretical advances and scientific innovations (Session 4) presents the results of a number of research projects on a wide variety of subjects, from centrifuge modelling to seismic design. This is followed by a short section on *Professional practice* (Session 5).

The section on *Slope engineering* (Session 6) contains a large number of papers that document the many advances in Asian slope engineering in recent years. The subjects covered include enhancing slope safety, slope information systems, lessons learnt from landslides, bioengineering, and the influence of rainfall on slope stability.

The three volumes contain a large amount of information, and make a good reference publication. The organisers and editors have done well to collate all the information from the conference, including contributions by the panellists, panel discussion and even a register of the participants, with email and postal addresses.

N. WHARMBY

SHAFT FRICTION OF CFA PILES IN CHALK.

J. A. Lord, T. Hayward and C. R. I. Clayton. CIRIA Project Report No. 86. Construction Industry Research and Information Association, 2003. ISBN 0 86017 886 2.

The research embodied in PR86 responds to concerns within the UK piling industry that previous CIRIA design recommendations for CFA piles in chalk were conservative. The lack of suitable load test data on CFA piles in chalk accounts

for the previously conservative design recommendations, and an integral part of the current research was to identify and analyse pile load tests carried out since 1994.

PR86 presents the results of about 60 pile load tests, of which 30 were suitable for deriving design values for shaft friction. The recommendations of the report in terms of design values of shaft friction are clearly presented and result in less conservative parameters for medium- and high-density chalk.

Reference is made in the report to the CIRIA publication C574 *Engineering in Chalk* (2002) for background information on

chalk descriptions. PR86 deals with chalk descriptions superficially, and an engineer would be advised to read C574 in conjunction with the current report to fully appreciate the behaviour of CFA piles in chalk.

Appendix 2 of the report sets out recommendations for site investigation methods appropriate for CFA piling in chalk. This provides a useful checklist for anyone considering the use of CFA piles at a chalk site.

R. NICHOLLS