

direction of the stress increment vector. Clearly any analytical model that describes the complete picture of the yield and flow of clay must take account of the rotation of the plastic strain increment vector as well as such phenomena as creep and time-hardening. While recognizing that the concepts of simple plasticity do not take account of these factors, the Authors were of the opinion (subsequently endorsed by Naylor, 1970) that the agreement between the observed and predicted shear strains shown in Fig. 11 of the Paper is not unreasonable.

REFERENCE

- NAYLOR, D. J. (1970). Correspondence on Stress-probe experiments on saturated normally consolidated clay. *Géotechnique* **20**, No. 3, 336-339.

BOOK REVIEWS

Rheological aspects of soil mechanics. L. Suklje. 571 pp. John Wiley, London and New York, 1969. £7.

This is a most interesting book, written by an internationally acknowledged expert on soil mechanics. The range of topics covered is very wide, including some applications of the classical theories of elasticity and plasticity, failure theories, soil strength (in shear and in tension), stability analysis of slopes, and earth pressures on retaining walls and foundations, in addition to the more obvious subjects of consolidation of soils and settlement analysis.

The various theories of consolidation of saturated and partly saturated soils are described in terms of rheological models where possible, although Professor Suklje's own method of isotaches is also dealt with in detail. The latter method has the advantage that it is not restricted to any particular rheological model (linear or non-linear), but against this it appears to be empirical, difficult to apply and of unknown accuracy.

This part of the book (dealing with consolidation and settlement) is fairly comprehensive and yet such topics as organic soils and the importance of physico-chemical effects in soils are not specifically discussed. There is also a lack of information regarding the behaviour of full-scale foundations and earth structures.

This is not a book for beginners or for those of very limited mathematical ability. While it might be included in a list of textbooks for a post-graduate course in soil mechanics it seems likely that the majority of its readers will be engaged in research. To these it can be recommended for the breadth of its survey of theoretical soil mechanics.

Professor Suklje has stated that the aim of the book is 'to clarify the applicability of various methods and the influence of various rheological factors, and to facilitate the choice of appropriate simplifications'. It cannot be claimed that this aim has been fully achieved. Consequently foundation engineers will not be able to use this as a reference book or handbook to which they can turn for ready-made solutions to their problems.

A valuable feature is Professor Suklje's ability to draw on research contributions from all parts of the world, including Russia, and to provide a summary of these in English for those who are less gifted linguistically.

A good list of references and a supplementary bibliography are included.

I.F.C.