

REVIEW

Turbulence Models and Their Application in Hydraulics. By W. RODI. International Association for Hydraulic Research, Delft, 1980. Paperback US\$15.

The order of the topics in Professor Rodi's title reflects the emphasis of the text; although about a third of this short book deals with example calculations relevant to hydraulics, most of these will also be of interest to workers in other branches of fluid dynamics. The description of turbulence modelling that forms the bulk of the book is an admirable introduction to the subject 'in a form easy to understand for anybody with a basic background in fluid mechanics' – to quote the aim stated in the preface. To quote again: 'The so-called $k-\epsilon$ turbulence model receives most attention in this review and is recommended as the most suitable model at the present state of the art'; Professor Rodi reminds the reader that he was involved in its development and may therefore seem not to be objective, but also points out that it has been more widely applied than any other model. More or less the whole range of turbulence models is discussed fully and fairly, although the simpler 'integral' methods are represented only by depth-averaged models for shallow-water flows.

The style is lucid, misprints are few, and this reviewer's only reservations concern matters of opinion rather than fact. The book can be warmly recommended to research students and research workers, and it will be particularly valuable to engineers with the responsibility of choosing a turbulence model for use in real-life predictions. The book is too short for particular models to be discussed in detail – and too short for any mention of numerical methods – although the 200 references give the reader a useful entry to the pre-1980 literature. This very lack of detail means that the book will not date quickly, even in the unlikely event of rapid progress in the difficult but important subject of turbulence modelling.

P. BRADSHAW

CORRIGENDUM

Rapid evaporation at the superheat limit

By J. E. SHEPHERD AND B. STURTEVANT

Journal of Fluid Mechanics, vol. 121, 1982, pp. 379–402

In the list of references, the paper attributed to M. G. Ribaud is in fact by A. M'Hinsi.