

Acknowledgement

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Book review

Fundamentals of Hot Wire Anemometry

Charles G. Lomas

The author has set himself the task of providing a book which contains theoretical and practical information which would otherwise be acquired by researching the technical literature. This research is, of course, made easier by the perusal of instrumentation manuals and the house journals of companies which manufacture hot-wire instrumentation and most new users cannot avoid the need for extensive laboratory practice. At first sight, it is also facilitated by the publications of previous books which include material considered in this volume and particularly by that entitled 'Hot-Wire Anemometry' by A. E. Perry (Clarendon Press, 1982). The Cambridge volume does not reference that from Oxford.

The scope of Dr Lomas' book is different from that of Dr Perry although there is considerable overlap. It encompasses hot-film anemometry, as does the article by L. M. Fingerson and P. Freymuth (in *Fluid Mechanics Measurements*, ed. R. J. Goldstein, Springer-Verlag, 1983), considers some practical features of measurements in air, liquids and two-phase flows and discusses the measurement of vorticity, temperature, velocity-temperature correlations. The descriptions are helpful to a user and, though by no means exhaustive, provide a wide perspective of applications of hot-wires and films. There are, however, omissions which probably stem from the author's

understandable lack of experience of all forms of the techniques which he describes. In the context of the probe-wire anemometry, for example, it would have been helpful to discuss the limitations imposed by size and by the inability to deal with high turbulence intensities.

The flavour is undoubtedly different from that of Dr Perry who provided a very detailed account of hot-wire anemometry, the transform equations and practical details essential to measurements of known accuracy. Here the emphasis tends to be more on breadth and the bringing together of known information to provide a valuable overview. The new user of hot-wire instrumentation will find the book of value, but it will not replace instrumentation manuals, the essential laboratory practice or the more detailed information provided by Dr Perry.

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