

Suggested examples are added to each chapter for further study, but the student reader may need the guidance of a tutor as solutions to the problems are not given. The units used throughout the book are Imperial/North American.

The text appears at first sight to be congested. This is due in part to the extensive descriptive material and to the fact that the print, and the sketches, are relatively small. However, this keeps the book to a reasonable size (250 pages, Octavo)

and once one has adjusted to the format, the text is eminently readable and the overall presentation is clear. The method used for emphasising certain words or phrases by underlining them is visually unattractive. The binding, in hard back, is sound.

D. L. Smith
ICI Ltd, Cleveland, UK

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Centrifugal pump clinic

I. J. Karassik

Compared to a conventional text, this is a somewhat unusual book; its basis was some queries the author received on problems in centrifugal pumps, which later appeared as a series of articles. The questions and answers were mainly to allow the readers to improve the operation and installation of their plant.

This book, then, is a selection of these articles and in consequence appears as a series of questions and answers, roughly gathered together in chapters on applications, pump construction, installation, maintenance and field troubles. Thus, the readers who would benefit are plant engineers and design engineers, rather than those with academic or theoretical leanings. The author also includes recent graduates in those that could benefit from its use.

Nearly 200 problems are detailed, ranging from an explanation of suction specific speed to installation questions such as how to arrange suction piping. Equal balance is given to hydraulic problems such as cavitation, pump selection and mechanical matters and plant installation.

Personally I don't like the format as the author has had to include a lot of text book material in his problems to offer a satisfactory explanation. This I feel, would be better written as a section of text with the problems following as examples. Likewise, the layout adopted means the facts are mixed up with the authors opinion and advice, with some of which, for instance the conditions for cavitation damage, I would not agree. He also reiterates old definitions

of cavitation inception, which is perhaps because he quotes references of 1937 vintage. The format also leads to great difficulty in tracing specific topics without reading the whole book each time. This is not helped by an incomplete index at the back.

Despite these criticisms, there is an enormous amount of most useful information given that is rarely found in other books. Although the items such as trimming impeller dimensions to get a specific head or flow is very useful, the reviewer especially appreciated the information not easily found elsewhere. This clearly includes much of the authors advice and opinions on design and installation, but also such things as the effect of altitude on NPSH, information on wear ring clearances and the effect of wear on the performance characteristics. Another useful topic was the operation of two pumps in series or parallel, and the differences involved as to whether the pumps had steep or flat characteristics, an important aspect which is usually ignored.

Whether looking for data on specification, technical factors or mechanical aspects, engineers involved in the practical side of centrifugal pumps will find this a valuable addition to their bookshelves.

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International Symposium on Applications of Laser Doppler Anemometry to Fluid Mechanics

5-7 July 1982
Lisbon, Portugal

Mechanics of Fluids in Porous Media

18-27 July 1982
Newark, DE, USA

Turbine and Vortex Flowmeters (Short Course)

27-29 July 1982
Cranfield, UK

17th Intersociety Energy Conversion Engineering Conference

8-13 August 1982
Los Angeles, CA, USA

AIChE Summer 1982 National Meeting

29 August-1 September 1982
Cleveland, OH, USA

M. Y. Corapcioglu, College of Engineering, Dept of Civil Engineering, 130 Dupont Hall, University of Delaware, Newark, DE 19711, USA

Professor J. H. Whitelaw, Mechanical Engineering Department, Imperial College, London, UK, SW7

Miss A. L. Roff, Short Course Officer, Cranfield Institute of Technology, Cranfield, Bedford, UK, MK43 0AL

J. Chiffreller, AIChE Meetings Department, 345 East 47th Street, New York, NY 10017, USA

T. Gilson, SOHIO, Cuyahoga Building, Cleveland, OH 44114, USA

Heat and Mass Transfer in Rotating Machinery	30 August–3 September 1982 Dubrovnik, Yugoslavia	Professor D. E. Metzger, Mechanical and Engineering Systems Engineering, Arizona State University, Tempe, AZ 85281, USA
NATO Advanced Research Workshop: Two Phase Flow and Heat Transfer	30 August–3 September 1981 Munich, FRG	Professor S. Kakac, University of Miami, Coral Gables, FL 33124, USA
Heat Exchangers: Design, Performance and Operation for the Processing Industries	30 August–3 September 1982 Geneva, Switzerland	The Center for Professional Advancement, Postbus 19865, 1000 GW Amsterdam, The Netherlands
7th International Heat Transfer Conference	6–10 September 1982 Munich, FRG	DECHEMA, Postfach 97 01 46, D-6000 Frankfurt, FRG
International Conference on the Physical Modelling of Multi-phase Flow	7–9 September 1982 Surrey, UK	The Conference Organiser, BHRA Fluid Engineering, Cranfield, Bedford, UK, MK43 0AJ
International Conference on Flow Induced Vibrations in Fluid Engineering	14–16 September 1982 Reading, UK	The Conference Organiser, BHRA Fluid Engineering, Cranfield, Bedford, UK, MK43 0AJ
Heat and Fluid Flow in Nuclear and Process Plant Safety	14–16 September 1982 Brighton, UK	Conference Department, The Institution of Mechanical Engineers, 1 Birdcage Walk, Westminster, London, UK, SW1H 9JJ
International Conference on Gas-Cooled Reactors Today (BNES)	20–24 September 1982 Bristol, UK	Conference Office, Institute of Civil Engineering, 1–7 Great George Street, London, UK, SW1P 3AA
Principles and Practice of Flow Measurement	4–8 October 1982 East Kilbride, Glasgow, UK	P. Collier, Conference Organiser, Department of Industry, National Engineering Laboratory, East Kilbride, Glasgow, UK, G75 0QU
Two Phase Flow Metering	5–7 October 1982 Cranfield, UK	Miss A. L. Roff, Short Course Officer, Cranfield Institute of Technology, Cranfield, Bedford, UK, MK43 0AL
International Conference on Recent Developments in the Custody Transfer of Crude Oil	26–27 October 1982 London, UK	Miss S. Mayhew, Scientific and Technical Studies, Oyez IBC Ltd, Norwich House, 11/13 Norwich Street, London, UK, EC4A 1AB
Two Phase Pressure Drop in Pipelines	2–3 November 1982 East Kilbride, Glasgow, UK	P. Collier, Conference Organiser, Department of Industry, National Engineering Laboratory, East Kilbride, Glasgow, UK, G75 0QU
Advanced Oil Flow Measurement Systems (Short Course)	8–12 November 1982 Cranfield, UK	Miss A. L. Roff, Short Course Officer, Cranfield Institute of Technology, Cranfield, Bedford, UK, MK43 0AL
Assessment of Two-Phase Flow Models Used in Nuclear Reactor Analysis	11–19 November 1982 Phoenix, AZ, USA	ASME, United Engineering Center, 345 East 47th Street, New York, NY 10017, USA
AIChE Fall 1982 Annual Meeting	14–18 November 1982 Los Angeles, CA, USA	Professor E. Hohmann, California State Polytechnic University, Chemical Engineering Department, 3801 W. Temple Avenue, Pomona, CA 9768, USA
ANS Winter Meeting	14–19 November 1982 Washington, DC, USA	American Nuclear Society, 555 North Kensington Avenue, La Grange Park, IL 60525, USA
ASME Winter Annual Meeting	14–19 November 1982 Phoenix, AZ, USA	ASME, 345 East 47th Street, New York, NY 10017, USA
Symposium on the Interaction of Water Chemistry and Heat Transfer in Boilers and Evaporators (Part of ASME Winter Annual Meeting)	14–19 November 1982 Phoenix, AZ, USA	J. B. Kitto, Babcock & Wilcox Co, R & D Division, PO Box 835, Alliance, OH 44601, USA
Symposium on Engineering Applications of Laser Velocimetry (Part of ASME Winter Annual Meeting)	14–19 November 1982 Phoenix, AZ, USA	Professor H. W. Coleman, Mechanical Engineering Department, Mississippi State University, PO Drawer ME, Mississippi State, MS 39762, USA
International Conference on the Physical Modelling of Multi-Phase Flow	19–21 March 1983 Guildford, UK	The Conference Organiser, BHRA Fluid Engineering, Cranfield, Bedford, UK, MK43 0AJ
Condensers: Theory and Practice (International Symposium)	22–23 March 1983 Manchester, UK	Dr D. R. Webb, Department of Chemical Engineering, UMIST, PO Box 88, Manchester, UK, M60 1QD
28th Annual International Gas Turbine Conference	27–31 March 1983 Phoenix, AZ, USA	ASME, 345 East 47th Street, New York, NY 10017, USA