Table of Contents

Preface p. vii

Acknowledgements p. ix

Part I Principles and Basic Applications p. 1

Short History of Hydraulics p. xi

Introductory Notes p. xv

Principal Symbols p. xix

1 Hydrostatics p. 3

2 Principles of Fluid Flow p. 27

4 Flow in Pipes and Closed Conduits p. 101

6 Pressure Surge in Pipelines p. 197

7 Hydraulic Machines p. 215

8 Wave Theory p. 229

3 Behaviour of Real Fluids p. 73

5 Open Channel Flow p. 135

9 Sediment Transport p. 301

10 Flood Hydrology p. 329

11 Dimensional Analysis and the Theory of Physical Models p. 389

12 Pipeline Systems p. 421

13 Hydraulic Structures p. 447

14 Computational Hydraulics p. 495

15 River and Canal Engineering p. 535

16 Coastal Engineering p. 569

17 Postscript p. 607

Index p. 613

Appendix A Moments of Area p. 609

Part II Aspects of Hydraulic Engineering p. 419