
CONTENTS

Contributors ix

Preface xi

Chapter 1 Introduction 1.1
Jamal M. Saleh

Chapter 2 Fluid Properties 2.1
Jamal M. Saleh

Chapter 3 Fluid Flow and Thermodynamics 3.1
Jamal M. Saleh

Chapter 4 Fluid Statics 4.1
Jamal M. Saleh

Chapter 5 Fluid Flow: Fundamental Concepts 5.1
Jamal M. Saleh

Chapter 6 The General Equations 6.1
Ralph W. Pike

Chapter 7 Applications of the Equations of Change 7.1
Ralph W. Pike

Chapter 8 Incompressible Flow 8.1
Thomas C. Ho

Chapter 9 Flow of Gases in Pipes and Ducts 9.1
Jamal M. Saleh

Chapter 10 Flow Minor Losses	10.1
<i>Jamal M. Saleh</i>	
Chapter 11 Hydrodynamics of Vapor-Liquid Two-Phase Flow	11.1
<i>Carl L. Yaws, Jamal M. Saleh</i>	
Chapter 12 Non-Newtonian Flow	12.1
<i>Ron Darby</i>	
Chapter 13 Two-Phase Flow: Liquid-Solid and Gas-Solid Flow	13.1
<i>Ron Darby, Jamal M. Saleh</i>	
Chapter 14 Molecular Flow	14.1
<i>Graeme A. Bird</i>	
Chapter 15 Flow Metering	15.1
<i>Zaki Husain</i>	
Chapter 16 Flow Control	16.1
<i>Daniel H. Chen</i>	
Chapter 17 Fluid Machines	17.1
<i>John Tuzson</i>	
Chapter 18 Fluid Flow Networks	18.1
<i>Jamal M. Saleh</i>	
Chapter 19 Flow in Open Channels	19.1
<i>Xing Fang, Heinz G. Stefan</i>	
Chapter 20 Flow Past Immersed Objects	20.1
<i>Stavros Tavoularis</i>	
Chapter 21 Transport Phenomena in Porous Media	21.1
<i>George G. Chase</i>	

Chapter 22 Fluid Transients	22.1
<i>Charles C. S. Song</i>	
Chapter 23 Flow Hydrodynamics in Chemical Processing Units	23.1
<i>Jack R. Hopper, Jamal M. Saleh</i>	
Chapter 24 An Introduction to Computational Fluid Dynamics	24.1
<i>Nasser Ashgriz, Javad Mostaghimi</i>	
Chapter 25 Corrosion and Erosion in Pipes	25.1
<i>Weixing Chen, Thomas R. Jack, Fraser King</i>	
Chapter 26 Blood Flow Dynamics	26.1
<i>George P. Chatzimavroudis</i>	
Chapter 27 Heat Transfer in Pipe Flow	27.1
<i>Kuyen Li, John L. Gossage</i>	
Chapter 28 Micro and Nano Flows	28.1
<i>Yong Zhao</i>	
Chapter 29 Flow Assurance	29.1
<i>Robert J. Wilkens</i>	
Chapter 30 Drag Reduction by Polymer Additives to Turbulent Flow Systems	30.1
<i>Thomas R. Marrero</i>	
Chapter 31 Turbulent Flow	31.1
<i>Stavros Tavoularis</i>	
Index	I.1