

Table of Contents

Chapter	Page
1 Pump Requirements for the Chemical Process Industries	1
2 Head and Pressure	23
3 Centrifugal Pump Principles	29
4 Total Head Required by a Piping System.....	33
5 Net Positive Suction Head	62
6 Flow of Liquids in Pipes	82
7 The Affinity Laws Pertaining to Centrifugal Pumps	88
8 Viscosity	96
9 Specific Speed and Suction Specific Speed.....	113
10 Impeller Loading.....	115
11 Bearings and Bearing Life.....	118
12 Shaft Sealing Devices	122
13 Shaft Deflection, Whip and Run-out.....	127
14 Vibration.....	130
15 Heat Generated in Pumping.....	133
16 Self-Priming Centrifugal Pumps	136
17 Centrifugal Pump Troubleshooting Guide	139
18 Suction Piping	149
Appendix.....	154