
TABLE OF CONTENTS

Editor's Preface	v
Preface to the English Edition	vii
Preface to the Second Russian Edition	ix
Preface to the Third Edition	xi
Nomenclature	xiii
Useful Conversions of Units	xvi
Reader's Guide and Introduction	xix
1. General Information and Elements of Aerodynamics and Hydraulics of Pressure Systems	1
2. Resistance to Flow in Straight Tubes and Conduits: Friction Coefficients and Roughness	75
3. Resistance to Flow at the Entrance in Tubes and Conduits: Resistance Coefficients of Inlet Sections	149
4. Resistance to Flow through Orifices with Sudden Changes in Velocity and Flow Area: Resistance Coefficients of Sections with Sudden Expansion, Sudden Contraction, Orifices, Diaphragms, and Apertures	189
5. Resistance to Flow with a Smooth Change in Velocity: Resistance Coefficients of Diffusers and Converging and Other Transition Sections	239
6. Resistance to Flow with Changes of the Stream Direction: Resistance Coefficients of Curved Segments — Elbows, Bends, etc	331
7. Resistance in the Cases of Merging of Flow Streams and Division into Flow Streams: Resistance Coefficients of Wyes, Tees, and Manifolds	413
8. Resistance to Flow through Barriers Uniformly Distributed Over the Channel Cross Section: Resistance Coefficients of Grids, Screens, Porous Layers, and Packings	503

9. Resistance to Flow through Pipe Fittings and Labyrinth Seals: Resistance Coefficients of Throttling Devices, Valves, Plugs, Labyrinth Seals, and Compensators	541
10. Resistance to Flow Past Obstructions in a Tube: Resistance Coefficients of Sections with Protuberances, Trusses, Girders, and Other Shapes	587
11. Resistance to Flow at the Exit from Tubes and Channels: Resistance Coefficients of Exit Sections.....	627
12. Resistance to Flow through Various Types of Apparatus: Resistance Coefficients of Apparatus and Other Equipment	701
Index	775