



Mechanics of Fluids

By Potter, Merle; Wiggert, David C.

CL-Engineering, 2001. Book Condition: New. Brand New, Unread Copy in Perfect Condition. A+ Customer Service! Summary: 1. Basic Considerations. Introduction. Dimensions, Units, and Physical Quantities. Continuum View of Gases and Liquids. Pressure and Temperature Scales. Fluid Properties. Conservation Laws. Thermodynamic Properties and Relationships. Problems. 2. Fluid Statics. Introduction. Pressure at a Point. Pressure Variation. Fluids at Rest. Linearly Accelerating Containers. Rotation Containers. Problems. 3. Introduction to Fluids in Motion. Introduction. Description of Fluid Motion. Classification of Fluid Flows. The Bernoulli Equation. Problems. 4. The Integral Forms of the Fundamental Laws. Introduction. System-to-Control-Volume Transformation. Conservation of Mass. Energy Equation. Moment-of-Momentum Equation. Summary. Problems. 5. The Differential Forms of the Fundamental Laws. Introduction. Differential Continuity Equation. Differential Momentum Equation. Differential Energy Equation. Summary. Problems. 6. Dimensional Analysis and Similitude. Introduction. Dimensional Analysis. Similitude. Normalized Differential Equations. Problems. 7. Internal Flows. Introduction. Entrance Flow and Developed Flow. Laminar Flow in a Pipe. Laminar Flow between Parallel Plates. Laminar Flow between Rotating Cylinders. Turbulent Flow in a Pipe. Uniform Turbulent Flow in Open Channels. Problems. 8. External Flows. Introduction. Separation. Flow Around Immersed Bodies. Lift and Drag on Airfoils. Potential Flow Theory. Boundary Layer Theory. Problems. 9. Compressible Flow. Introduction. Speed of Sound and...



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