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1. Definitions. 2. Bluff Bodies.; 3. Round Bodies.; 4. Streamlined Bodies.; 5. Skin Friction.; 6. Parasite Drag of Major Airplane Components.; Part Two - THE AIRPLANE WING; CHAPTER VI - FUNDAMENTAL NOTIONS. GEOMETRY OF WINGS; 1. The Three Coefficients.; 2. Geometry of Airfoil Profiles. Sets of Profiles.; 3. Theoretically Developed Airfoil Sections.; 4. Geometry of Airplane Wings.; CHAPTER VII - EMPIRICAL AIRFOIL DATA; 1. The Three Main Results.; 2. Influence of Aspect Ratio.; 3. Historical Development of Wing Profiles.; 4. Influence of the Shape of the Profile. 5. Influence of the Reynolds Number. Degree of Turbulence. CHAPTER VIII - THE WING OF INFINITE SPAN; 1. The Momentum Equation for Irrotational Flow.; 2. The Lift of an Airfoil of Infinite Span.; 3. The Pitching Moment of an Airfoil of Infinite Span.; 4. The Metacentric Parabola.; 5. Vortex Sheets, Another Approach.; 6. Theory of Thin Airfoils.; APPENDIX; CHAPTER IX - THE WING OF FINITE SPAN; 1. Curved Vortex Lines.; 2. Vortex Sheet and Discontinuity Surface.; 3. The Flow Past a Wing of Finite Span.; 4. Prandtl's Wing Theory.; 5. Elliptic Lift Distribution.; 6. Biplane Theory. 7. General Lift Distribution. CHAPTER X - ADDITIONAL FACTS ABOUT WINGS; 1. Stalling.; 2. High-lift Devices.; 3. Pressure Distribution.; 4. Influence of Compressibility.; Part Three - PROPELLER AND ENGINE; CHAPTER XI - THE PROPELLER; 1. Basic Concepts.; 2. Geometry of Propellers.; 3. Propeller Characteristics.; 4. Quantitative Analysis.; 5. Propeller Sets and Variable-pitch Propeller. Propeller Charts.; CHAPTER XII - OUTLINE OF PROPELLER THEORY; 1. Blade-element Theory.; 2. Momentum Theory, Basic Relations.; 3. Momentum Theory, Conclusions.; 4. Modified Momentum Theory. 5. The Two Theories Combined.

Sommario/riassunto

"An outstanding textbook." - Scientific, Medical and Technical Books
Almost unsurpassed as a balanced, well-written account of fundamental fluid dynamics, Theory of Flight may still be recommended for a clearer presentation than is to be forced in many more recent works, though it is limited to situations in which air compressibility effects are unimportant. Designed for the college senior or beginning graduate student, the text assumes a knowledge of the principles of calculus and some training in general mechanics. It is unusual in offering a well-balanced introduction, stressing equally th

2. Record Nr.	UNISA996716310503316
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