DESCRIPTION

Provides a Comprehensive Introduction to Aircraft Design with an Industrial Approach

This book introduces readers to aircraft design, placing great emphasis on industrial practice. It includes worked out design examples for several different classes of aircraft, including Learjet 45, Tucano Turboprop Trainer, BAe Hawk and Airbus A320. It considers performance substantiation and compliance to certification requirements and market specifications of take-off/landing field lengths, initial climb/high speed cruise, turning capability and payload/range. Military requirements are discussed, covering some aspects of combat, as is operating cost estimation methodology, safety considerations, environmental issues, flight deck layout, avionics and more general aircraft systems. The book also includes a chapter on electric aircraft design along with a full range of industry standard aircraft sizing analyses.

Split into two parts, Conceptual Aircraft Design: An Industrial Approach spends the first part dealing with the pre-requisite information for configuring aircraft so that readers can make informed decisions when designing vessels. The second part devotes itself to new aircraft concept definition. It also offers additional analyses and design information (e.g., on cost, manufacture, systems, role of CFD, etc.) integral to conceptual design study. The book finishes with an introduction to electric aircraft and futuristic design concepts currently under study.

• Presents an informative, industrial approach to aircraft design

• Features design examples for aircraft such as the Learjet 45, Tucano Turboprop Trainer, BAe Hawk, Airbus A320

• Includes a full range of industry standard aircraft sizing analyses
• Looks at several performance substantiation and compliance to certification requirements

• Discusses the military requirements covering some combat aspects

• Accompanied by a website hosting supporting material

*Conceptual Aircraft Design: An Industrial Approach* is an excellent resource for those designing and building modern aircraft for commercial, military, and private use.

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⚠️ ABOUT THE AUTHOR

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