

Book presentation

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AEROSPACE MATERIALS
University book (in Croatian)

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The historical survey of the development of Zeppelins, passenger and military airplanes, helicopters, air gliders, unmanned aerial vehicles, satellites and similar flying objects shows that the advanced materials were applied and tested in such structures. The best examples are aluminium and titanium alloys, superalloys and ceramics, and today composite materials in particular.

These materials were tested and exploited in very complex and extreme working conditions, and only after passing such tests they came into use in other fields, such as sports equipment, cars, trains and other vehicles, yachts and luxury ships, medical apparatuses etc.

The textbook is aimed primarily at students of aeronautical engineering at the Faculty of Mechanical Engineering and Naval Architecture, University of Zagreb. Its table of contents corresponds with the units of study of the course *Aerospace Materials*.

However, the scope of the book is much wider than the field of study that is to be mastered in this course. Namely, an additional purpose of writing this book was to spread knowledge of contemporary materials to a wider audience of technical professionals – primarily in mechanical, naval, and transportation engineering.

The book focuses on the explanation of the basic characteristics and behaviour of materials, and not on descriptions of technologies of the production, forming and joining of materials. An exception are composite materials, because the structure and properties of these materials are created simultaneously during their manufacture. For metallic materials it was necessary to describe the characteristics of heat treatment processes carried out to enhance the mechanical properties of the materials.

This is the first book in this field written in the Croatian language.

Book presentation

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