

Preface

Wood is an excellent construction material, which has been used by people for thousands of years for the production of building constructions, machinery, tools, interior design, including furniture, accessories, and even jewellery. In particular, pieces of furniture made from wood are structures, which sometimes have not changed their form and technical solutions for several millennia. Many excellent furniture models were the work of outstanding designers, who have mastered all the details with reverence. To this day, they are appreciated and recognised among connoisseurs and collectors of works of art.

Today, many countries have recognised design as a priority direction for the development of education and economy, seeing in it the quintessence of innovation and an opportunity to modernise European economy. However, it should be noted that modern furniture is not only the fruit of the work of individual architects and artists. Creating an attractive, functional, ergonomic and safe piece of furniture requires an effort of many people working in interdisciplinary teams, and to them, among others, this book is addressed.

The aim of the book is to present the principles of designing furniture as wooden structures. It discusses issues related to the history of the furniture structure, classification and characteristics in terms of the most important features essential during designing, ergonomic approach to anthropometric requirements and safety of use. It presents methods and errors of designing, characteristics of the materials, components, joints and structures, and rules of developing design documentation. It also raises the issue of calculating the stiffness and endurance of parts, joints and whole structures, including the questions of the loss of furniture stability and of resulting threats to health and even life of the user.

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