

<<机电工程科技英语>>

图书基本信息

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内容概要

本书以机电工程领域的英语文献为教学内容，全书包括：工程材料、金属成形、机械零件、计算机应用、工业设计、数控加工、计算机集成制造、特种加工、机电学与测量系统、汽车、飞机设计、飞机制造、微机电系统、机器人、工业工程等17个单元的教学内容，另外还包括了科技英语翻译、科技英语写作等科技英语技能拓展辅助教学内容。

本书旨在提高学生的专业英语快速阅读理解能力，同时希望能锻炼英文写作能力。

本书适合于理工科大专院校机械工程或机电工程专业的学生学习使用，也可供专业技术人员阅读。

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章节摘录

Mechanical properties mean a material's ability to carry or resist the application of mechanical forces and loads. The material's reaction to these forces is usually either deformation or fracture. Mechanical properties are probably the most important to manufacturing processing. They determine the extent to which a material may be formed, sheared, or machined. Typical forces which are applied to a material are tension, compression, shear, and torsion, these forces are used to form and shape materials. Furthermore, materials must withstand excess amounts of these forces in product applications. Since screws are used to assemble wood parts, they must absorb torsion forces. Rods holding suspended fixtures must withstand excess tension forces. The head of a hammer must absorb compression forces. (1) Stress-strain. The stress-strain relationship is often used to study many mechanical properties. Stress is force applied to material. It is usually measured in either pounds per square inch or kilograms per square centimeter. Strain is the change in the length of a material which is under stress. The strain measurements are given in term of the amount of elongation of the material per unit of length. Strain is given in thousandths of an inch per inch of material or millimeters (of smaller units) per centimeter of material. For most materials, the elongation of a material under stress is quite small.

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