<<机电工程专业英语>>

图书基本信息

书名：<<机电工程专业英语>>

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内容概要

本书共有27篇课文，主要内容包括机械设计制造技术、机械工程材料、公差与配合、数控技术、机电一体化技术、材料成形、模具设计与制造、汽车工程和科技写作等方面的专业英语知识。
同时，为了反应本学科的发展趋势，又增添了微机械(MEMS)设计技术和热管工程应用技术方面的内容。
书后附有科技英语翻译及写作的简单介绍，还附有课文参考译文。
本书适合作为机械设计制造及自动化、机械工程及自动化、机电工程等专业的专业英语教材，也可以供从事机械工程各专业工作的工程技术人员参考使用。

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书籍目录

章节摘录

Lesson 4 Machine Parts (II) Fastener Fasteners are devices which permit one part to be joined to a second part and, hence, theyare involved in almost all designs. There are three main classifications of fasteners, which are described as follows: (1) Removable. This type permits the parts to be readily disconnected without damagingthe fastener. An example is the ordinary nut-and-bolt fastener. (2) Semi permanent. For this type, the parts can be disconnected, but some damage usuallyoccurs to the fastener. One such example is a corer pin. (3) Permanent. When this type of fastener is used, it is intended that the parts will never bedisassembled. Examples are riveted joints and welded joints. The importance of fasteners can be realized when referring to any complex product. In the case of the automobile, there are literally thousands of parts which are fastened together top roduce the total product. The failure or loosening of a single fastener could result in a simple nuisance such as a door rattle or in a serious situation such as a wheel coming off. Suchpossibilities must be taken into account in the selection of the type of fastener for the specific application. Nuts, bolts, and screws are undoubtedly the most common means of joining materials. Since they are so widely used, it is essential that these fasteners attain maximum effectiveness at the lowest possible cost. An ordinary nut loosens when the forces of vibration overcome those of friction. In a nut and lock washer combination, the lock washer supplies an independent locking feature preventing the nut from. loosening. The lock washer is useful only when the bolt might loos enbecause of a relative change between the length of the bolt and the parts assembled by it. [2]This change in the length of the bolt can be caused by a number of factors-creep in the bolt, loss of resilience , difference in thermal expansion between the bolt and the bolted members, or wear. In the above static cases, the expanding lock washer holds the nut under axial load and keeps the assembly tight. When relative changes are caused by vibration forces, the lock washer is not nearly as effective. Rivets are permanent fasteners.

编辑推荐

根据最新就业行情和相关行业标准，对原版内容进行合理调整或重大修改，使之更能符合知识的更新，反映学科现代最新理论、新技术、新材料和新工艺。

定位更加准确，大量增加相应工程实例，在保证内容反映国内外机械学科最新发展的基础上，满足高等院校的机械类专业教学要求。

注重各学科基本理论，又注重现行设计方法的理论依据和工程背景，面向就业，培养学生创新能力和职业素质。

配有大量实物照片和较多三维模拟图表达机械设备的实体结构和线框结构，包括零件图、装配图和爆炸图，形象生动，使内容表达更加直观易懂。

力求写作风格新，内容新，使学生对教材不产生畏难情绪，增强教材的可读性，突出实用性和可操作性。

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