

<<Autodesk Inventor 10>>

图书基本信息

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前言

本套丛书是由清华大学出版社和中国工程图学学会图学教育专业委员会共同策划的。

双语教学是近年来国内高校的教学改革热点之一，目前在数十所高校中已经开展了制图课程的双语教学。

从目前国内开展双语教学的高校使用的教材来看，大体上有以下几种情况：直接选用欧美原版教材；中国的制图教师根据我国的教学基本要求改编的原版教材，并以附录的形式讲解投影法和标准方面的差异；中国的制图教师编写的英文教材；中国的制图教师编写的中英文对照的双语教材等。为了给我国高校的制图教师开展双语教学时提供更多的教材选择，也为了使我国高校的广大师生对美国制图课程的现状有更多的了解，清华大学出版社和中国工程图学学会图学教育专业委员会决定出版这套丛书。

经过编委会一年多的分析与研究，我们从数十本美国原版教材中选择了6本构成了本套丛书，包括机械类的制图教材两本，近机械类与非机械类的制图教材两本，CAD与计算机图形学方面的教材两本。需要说明的是美国的制图教材并未按照上述方式分类，所谓不同的类别是由本套丛书的编委会根据其内容来确定的。

由于美国原版教材的内容远远多于我国同类教材的内容，编委会根据我国的实际情况，以“教学基本要求”为依据，对其内容进行了删减，在这一过程中，未对原版教材作任何改写，以保证其“原汁原味”的风格。

我们希望通过这种方法，给开展制图课双语教学的院校提供一套既能保持原版教材风貌，又符合我国实际情况的英语教材。

最后，清华大学出版社及本套丛书的编委会对积极提供样书供编委会选择的美国麦格劳-希尔公司和培生公司表示衷心的感谢，是他们的积极配合使得这套丛书得以顺利出版。

限于改编者的水平，书中不当之处在所难免，欢迎广大读者批评指正。

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内容概要

(1) 《Autodesk Inventor 10工程设计绘图》适用面广，适合Inventor初学者及机械设计人员；(2) 各章给出设计习题，便于读者练习；(3) 结合设计的实例很有指导意义和实用价值。

《Autodesk Inventor 10工程设计绘图》的价值： 《Autodesk Inventor 10工程设计绘图》是一本学习Autodesk Inventor10的教材，是使用该设计软件的工程技术人员和各类学校的学生、教师极好的学习和参考用书。

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章节摘录

插图：This book introduces Autodesk Inventor 10 and shows how to use Autodesk Inventor to create and document designs . The content of the book goes beyond the material normally presented in an engineering graphics text associated with CAD software to include exercises requiring students to design simple mechanisms . The book also presents a number of projects based on the concepts of Project-Based Learning (PBL) . These projects not only serve to help students learn how to create drawings , but also help start an understanding of fundamental engineering design concepts . All topics are presented using a step-by-step format so that the reader can work directly from the text to the screen . The book contains many sample problems that demonstrate the subject being discussed . Each chapter contains a variety of exercise problems that serve to reinforce the material just presented and allow the reader to practice the techniques described . Chapters 1 and 2 present 2D sketching commands and the Extrude command . These chapters serve as an introduction to the program . Chapter 3 demonstrates the commands needed to create 3D models , including the Shell , Rib , Split , Loft , Sweep , and Coil commands . Work points , work axis , and work planes are explained and demonstrated . Chapter 4 shows how to create orthographic views from 3D models . The creation of isometric views , sectional views , and auxiliary views is also covered . Chapter 5 shows how to create assembly drawings using both the bottom-up and top-down process . The chapter includes presentation drawings and exploded isometric drawings with title blocks , parts lists , revision blocks , and tolerances blocks . There is an extensive step-by-step example that shows how to create an animated assembly, that is , a drawing that moves on the screen . Chapter 6 covers threads and fasteners . Drawing conventions and callouts are defined for both inch and metric threads . The chapter shows how to calculate thread lengths and how to choose the appropriate fastener from Inventor's Content Center . The Content Center also includes an extensive listing of nuts , setscrews , washers , and rivets . Chapter 7 shows how to apply dimensions to drawings . Both ANSI and ISO standards are demonstrated . Different styles of dimensioning , including ordinate , baseline , and Inventor Hole Table . are presented . Applying dimension to a drawing is considered an important skill , so many examples and sample problems are included . Chapter 8 is an extensive discussion of tolerancing , including geometric tolerances . The chapter first shows how to use Inventor to apply tolerances to a drawing . The chapter then shows how to calculate tolerances in various design situations . Positional tolerances for both linear and geometric applications are included . The chapter introduces the Limits and Fits option of the Design Accelerator t001 . The information contained in this option eliminates the need for an appendix that includes fit tables .

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