

<<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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<<Autodesk Inventor 10>>

书籍目录

Chapter 1 Getting Started 1-1 Introduction 11-2 Creating a First Sketch 31-3 Creating a Solid Model 51-4 Exercise Problems 10

Chapter 2 Two-Dimensional Sketching 2-1 Introduction 152-2 Line 152-3 Spline 172-4 Circle 182-5 Ellipse 182-6 Arc 202-7 Rectangle 222-8 Fillet 222-9 Chamfer 232-10 Polygon 252-11 Mirror 262-12 Rectangular Pattern 272-13 Offset 282-14 Extend 282-15 Trim 282-16 Move 302-17 Rotate 312-18 Constraints 322-19 Show Constraints 332-20 TOEdit a Sketch 342-21 Insert AutoCAD File 352-22 Text 382-23 Exercise Problems 40

Chapter 3 Three-Dimensional Models 3-1 Introduction 473-2 Extrude 473-3 Revolve 483-4 Holes 503-5 Shell 523-6 Fillet 543-7 Chamfer 553-8 Face Draft 553-9 Split 583-10 Mirror 593-11 Rectangular Pattern 603-12 Circular Pattern 613-13 Sketch Planes 623-14 TOEdit a 3D Model 633-15 Default Planes and Axes 663-16 Work Planes 673-17 Angled Work Planes 713-18 Offset Work Planes 723-19 Work Points 733-20 Work Axes 753-21 Ribs (Webs) 753-22 Loft 753-23 Sweep 773-24 Coil 783-25 Model Material 803-26 Exercise Problems 84

Chapter 4 Orthographic Views 4-1 Introduction 974-2 Fundamentals of Orthographic Views 974-3 Orthographic Views with Inventor 1034-4 Isometric Views 1064-5 Section Views 1074-6 Offset Section Views 1104-7 Aligned Section Views 1114-8 Detail Views 1114-9 Broken Views 1124-10 Auxiliary Views 1134-11 Exercise Problems 116

Chapter 5 -Assembly Drawings 5-1 Introduction 1335-2 Bottom-Up and Top-Down Assemblies 1335-3 To Start an Assembly Drawing 1335-4 Degrees of Freedom 1345-5 Move and Rotate 1375-6 Constraint 1375-7 Sample Assembly Problem SP5-1 1425-8 Presentation Drawings 1425-9 Animation 1455-10 Isometric Drawings 1465-11 Assembly Numbers 1465-12 Parts List 1495-13 Title Block 1515-14 Drawing Sheets 1535-15 Other Types of Drawing Blocks 1545-16 Sample Problem SP5-2 1575-17 Top-Down Assemblies 1585-18 Editing a Part within an Assembly Drawing 1725-19 Pattern Component 1745-20 Mirror Components 1745-21 Copy Components 1745-22 Exercise Problems 178

Chapter 6 -Threads and Fasteners 6-1 Introduction 1936-2 Thread Terminology 1936-3 Thread Callouts-Metric Units 1946-4 Thread Callouts-ANSI Unified Screw Threads 1946-5 Thread Representations 1956-6 Internal Threads 1966-7 Threaded Blind Holes 1976-8 Creating Threaded Holes Using the Hole Command 1986-9 Standard Fasteners 2016-10 Sizing a Threaded Hole to Accept a Screw 2026-11 Screws and Nuts 2046-12 Types of Threaded Fasteners 2086-13 Flat Head Screws-Countersunk Holes 2096-14 Counterbores 2126-15 TO Draw Fasteners Not Included in the Content Center 2156-16 Fasteners from the Web 2166-17 Sample Problem SP6-1 2176-18 Washers 2206-19 Set Screws 2236-20 Rivets 2266-21 Exercise Problems 227

Chapter 7 Dimensioning 7-1 Introduction 2477-2 Terminology and Conventions-ANSI 2487-3 Creating Drawing Dimensions 2497-4 Drawing Scale 2547-5 Units 2547-6 Aligned Dimensions 2567-7 Radius and Diameter Dimensions 2567-8 Dimensioning Holes 2587-9 Dimensioning Counterbored, Countersunk Holes 2617-10 Angular Dimensions 2627-11 Ordinate Dimensions 2647-12 Baseline Dimensions 2667-13 Hole Tables 2687-14 Locating Dimensions 2687-15 Fillets and Rounds 2707-16 Rounded Shapes Internal 2707-17 Rounded Shapes External 2707-18 Irregular Surfaces 2707-19 Polar Dimensions 2727-20 Chamfers 2727-21 Knurling 2737-22 Keys and Keyseats 2737-23 Symbols and Abbreviations 2737-24 Symmetry and Centerline 2757-25 Dimensioning to a Point 2757-26 Sectional Views 2757-27 Orthographic Views 2767-28 Exercise Problems 277

Chapter 8 Tolerancing 8-1 Introduction 2898-2 Direct Tolerance Methods 2898-3 Tolerance Expressions 2908-4 Understanding Plus and Minus Tolerances 2908-5 Creating Plus and Minus Tolerances 2918-6 Limit Tolerances 2938-7 Angular Tolerances 2948-8 Standard Tolerances 2968-9 Double Dimensioning 2968-10 Chain Dimensions and Baseline Dimensions 2978-11 Tolerance Studies 2998-12 Rectangular Dimensions 2998-13 Hole Locations 3008-14 Choosing a Shaft for a Toleranced Hole 3008-15 Sample Problem SP8-1 3018-16 Sample Problem SP8-2 3028-17 Nominal Sizes 3028-18 Standard Fits (Metric Values) 3028-19 Hole and Shaft Basis 3038-20 Calculated Hole and Shaft Sizes 3038-21 Standard Fits (Inch Values) 3038-22 Sample Problem SP8-3 3038-23 Preferred and Standard Sizes 3088-24 Surface Finishes 3088-25 Surface Control Symbols 3118-26 Design Problems 3148-27 Geometric Tolerances 3188-28 Tolerances of Form 3188-29 Flatness 3188-30 Straightness 3188-31 Straightness (RFS and MMC) 3198-32 Circularity 3218-33 Cylindricity 3228-34 Geometric Tolerances Using Inventor 3238-35 Tolerances of Orientation 3298-36 Datums 3298-37 Perpendicularity 3308-38 Parallelism 3328-39

<<Autodesk Inventor 10>>

Angularity 3328-40 Profiles 3328-41 Runout 3348-42 Positional Tolerances 3358-43 Virtual Condition 3378-44
 Floating Fasteners 3378-45 Sample Problem SP8-4 3388-46 Sample Problem SP8-5 3388-47 Fixed Fasteners
 3398-48 Sample Problem SP8-6 3408-49 Design Problems 3408-50 Exercise Problems 343Chapter 9 Bearings and
 Shafts9-1 Introduction 3719-2 Sleeve Bearings 3719-3 Sample Problem SP9-13739-4 Sample Problem SP9-2
 3749-5 Ball Bearings 3779-6 Shafts 3809-7 Shear and Moment Diagrams 3829-8 Minimum Shaft Diameters 3889-9
 Shock Factors 3899-10 Shaft Deflection 3909-11 Sample Problem SP9-3 3929-1 2 Sample Problem SP9-4 3939-13
 Critical Speed 3949-14 Sample Problem SP9-5 3949-15 Exercise Problems 399Chapter 10-Gears10-1 Introduction
 40310-2 Gear Terminology 40410-3 Gear Formulas 40410-4 Drawing a Gear Using Inventor 40510-5 Gear Ratios
 40610-6 Gear Trains 40810-7 Designing Gear Speed Ratios 40910-8 Forces in Gears 41010-9 Sample Problem
 SPI0-1 41210-10 Sample Problem SP10-2 41310-11 Design Accelerator Spur Gears 41410-12 Forces in Gear Trains
 41610-13 Sample Problem SPI0-3 41710-14 Sample Problem SP10-4 41810-15 Safety Factors 41810-16 Service
 Factors 41910-17 Lubrication Factors 41910-18 Sample Problem SPI0-5 41910-19 Manufacturers' Catalogs
 41910-20 Web Sites 42110-21 Forces in Nonmetallic Gears 42110-22 Sample Problem SP10-6 42210-23 Metric Spur
 Gears 422.....Chapter 11 Cams Springs and KeysChapter 12 Sheet Metal and WeldmentsChapter 13 The Design
 ProcessChapter 14 Design ProjectsIndex

<<Autodesk Inventor 10>>

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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