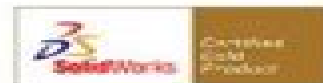




CAMWorks®
A Geometric Product

CAMWorks 2013 Multiaxis Machining Tutorial



Manual Camworks Axis

Kuang-Hua Chang



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Virtual Machining Using CAMWorks 2023 Kuang-Hua Chang, 2023-08 Teaches you how to prevent problems reduce manufacturing costs shorten production time and improve estimating Designed for users new to CAMWorks with basic knowledge of manufacturing processes Covers the core concepts and most frequently used commands in CAMWorks Incorporates cutter location data verification by reviewing the generated G codes This book is written to help you learn the core concepts and steps used to conduct virtual machining using CAMWorks CAMWorks is a virtual machining tool designed to increase your productivity and efficiency by simulating machining operations on a computer before creating a physical product CAMWorks is embedded in SOLIDWORKS as a fully integrated module CAMWorks provides excellent capabilities for machining simulations in a virtual environment Capabilities in CAMWorks allow you to select CNC machines and tools extract or create machinable features define machining operations and simulate and visualize machining toolpaths In addition the machining time estimated in CAMWorks provides an important piece of information for estimating product manufacturing cost without physically manufacturing the product The book covers the basic concepts and frequently used commands and options you ll need to know to advance from a novice to an intermediate level CAMWorks user Basic concepts and commands introduced include extracting machinable features such as 2 5 axis features selecting machine and tools defining machining parameters such as feed rate generating and simulating toolpaths and post processing CL data to output G codes for support of CNC machining The concepts and commands are introduced in a tutorial style presentation using simple but realistic examples Both milling and turning operations are included One of the unique features of this book is the incorporation of the CL cutter location data verification by reviewing the G codes generated from the toolpaths This helps you understand how the G codes are generated by using the respective post processors which is an important step and an ultimate way to confirm that the toolpaths and G codes generated are accurate and useful This book is intentionally kept simple It primarily serves the purpose of helping you become familiar with CAMWorks in conducting virtual machining for practical applications This is not a reference manual of CAMWorks You may not find everything you need in this book for learning CAMWorks But this book provides you with basic concepts and steps in using the software as well as discussions on the G codes generated After going over this book you will develop a clear understanding in using CAMWorks for virtual machining simulations and should be able to apply the knowledge and skills acquired to carry out machining assignments and bring machining consideration into product design in general Who this book is for This book should serve well for self learners A self learner should have a basic physics and mathematics background We assume that you are familiar with basic manufacturing processes especially milling and turning In addition we assume you are familiar with G codes A self learner

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Appendix D Preparatory Functions
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Automatic Generation of 2 1/2 AXIS NC Instructions from a Geometric Solid Model Patricia A. Shafer, 1985

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