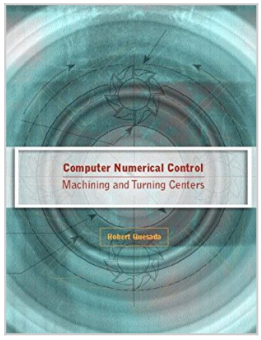

Computer Numerical Control: Machining and Turning Centers

By Robert Quesada

Computer Numerical Control: Machining and Turning Centers By Robert Quesada

For introductory courses in CNC manufacturing technology and machine technology.
This superbly detailed and illustrated text clearly defines, explains and illustrates the basics of CNC machining centers and CNC turning machines. The volume sufficiently identifies, outlines and explains all the important fundamentals of control components, control operations, machine operation functions, and setup methods and procedures. It provides hands-on experience with a straightforward step-by-step methodology that is easy to understand and illustrates the main components and characteristics that are associated with each CNC machine type.

Computer Numerical Control: Machining and Turning Centers

By Robert Quesada

Computer Numerical Control: Machining and Turning Centers By Robert Quesada

For introductory courses in CNC manufacturing technology and machine technology.
This superbly detailed and illustrated text clearly defines, explains and illustrates the basics of CNC machining centers and CNC turning machines. The volume sufficiently identifies, outlines and explains all the important fundamentals of control components, control operations, machine operation functions, and setup methods and procedures. It provides hands-on experience with a straightforward step-by-step methodology that is easy to understand and illustrates the main components and characteristics that are associated with each CNC machine type.

Computer Numerical Control: Machining and Turning Centers By Robert Quesada Bibliography

- Sales Rank: #1310658 in Books
- Published on: 2004-05-28
- Original language: English
- Number of items: 1
- Dimensions: 10.80" h x 1.20" w x 8.30" l, 2.54 pounds
- Binding: Paperback
- 560 pages

Editorial Review

From the Back Cover

This book was developed to introduce students and machining professionals to the basic operations and methods of computer numerical control (CNC) technology. It provides a solid foundation for future advanced design and programming study.

Intended for readers with diverse backgrounds, concepts are presented using an applied, hands-on, step-by-step methodology, which is easy to understand and follow. Using generic examples not tied to a particular brand, coverage includes CNC set-up, operation, tooling, program structure, and machining processes. In addition, reviews of mathematics, blueprint reading, and metrology are included as needed.

Some of the key features include:

- Safety issues are emphasized throughout the text.
- Useful and effective illustrations visually support the explanations and program samples.
- Readers are shown how to understand the format and concepts of CNC programs.
- G-Codes, M-Codes, and the various other letter address codes are all discussed, in addition to operational codes, such as tool changing, offsets, spindles speed, coolant, and program stops.
- CNC machine types, toolholders, cutting tools, and workholding devices are fully covered.

This textbook was developed to introduce the student to the basics of CNC technology, and to prepare him or her for future CNC machining and programming courses that may follow. Included is related tooling data, machining data, shop mathematics, and CNC machine and control information. *Computer Numerical Control* clearly distinguishes between CNC machining centers and CNC lathes and will prepare students exceptionally well for CNC machining in each respective area.

First and foremost, this textbook is intended for students with diverse backgrounds. This includes students just out of high school, or students who may have had some training in industry or in the military. These students may just be beginning alternative or second careers. Other students may already be regular employees or trainees in industry. They may need to learn CNC machining in order to improve their skills as a programmer-operator. They all need a timely but meaningful introduction to CNC. Although there is no prerequisite to this book, it is always helpful to have some minimal exposure to CNC machine tools in the workplace.

This book was written because existing books either assume that the reader has extensive knowledge of CNC or are too specialized for a complete understanding of CNC technology. Other books tend to use examples that put too much emphasis on a specific machine, or may concentrate on one part of CNC, such as machine control or programming. These books may be too theoretical or verbose, may include material that is not work oriented, or may not fully provide students a hands-on experience with the knowledge and skills they need to get started on the job.

The pedagogical approach in this book is to stress hands-on application over theoretical material. It applies a step-by-step method that is straightforward, usable, and easy to understand. Because numerous machine tool

brands exist, it presents generic examples and illustrations of their common characteristics, including CNC setup, operation, tooling, program structure, and machining. After introducing each of these areas, the book shows how they are intertwined in typical CNC machining centers and CNC lathes. These generic examples give students to-the-point coverage of what they need to know (without material that is just nice to know) to get up and running on the job—efficiently, productively, and safely.

Several chapters include CNC program samples that the student will learn to read block by block. The program examples progress in a spiral fashion. This gives students a good understanding of the unit just completed, making the next unit easier to undertake. Some students may have had courses in mathematics (including trigonometry), blueprint reading, and metrology, as well as other machining-related courses, while others may need a review of these materials. Therefore, these topics coupled with data from the appendixes will be brought into the coverage as needed.

This textbook, then, provides a learning tool that can be used in both educational and in-plant training environments. In education, it will certainly help students develop a better understanding of all the components that make up CNC machining technology. Whenever possible, it is recommended that a CNC laboratory component be included with this course. This will give the student a greater understanding of the material covered in the textbook.

This text material and the methodology have been class tested at Milwaukee Area Technical College (MATC) in the CNC machine-related programs. Feedback was obtained from students, teachers, and employers who subsequently employ these students. After reading this book students, regardless of their background and institutional affiliation, will have a fundamental understanding of CNC technology, CNC terminology, and CNC machine and control operations, and will be able to decipher CNC programs.

Distinguishing Features

- An initial and overall emphasis is placed on safety.
- Each unit begins with objectives that clearly identify the unit expectations.
- Useful and effective illustrations visually support the explanations and program samples.
- Students are not directed to create CNC programs, but rather to understand the format and concepts of CNC programs.
- A focus is placed on G codes, M codes, and the various other letter address codes. This also will prepare students who will study CAM system courses because CNC downloads are typically in those formats.
- A focus is placed on operational-type codes such as tool changing, offsets, spindle speed, coolant, and program stops.
- Summary learning tables and charts are included for easy reference.
- CNC machine types and components are clearly described and illustrated.
- CNC toolholders and cutting tools are clearly described and illustrated.
- CNC workholding devices and setup methods are clearly described and illustrated.
- CNC control features and operations are clearly described and illustrated.
- Related technical data such as shop mathematics, feedrate, spindle speed, surface finish, material types, cutter inserts, and geometric dimensioning and tolerancing are linked to the overall CNC process.
- The appendixes and glossary contain valuable and pertinent CNC and machining-related information.

Users Review

From reader reviews:

Robert Stratton:

Book is to be different for each grade. Book for children till adult are different content. As you may know that book is very important for people. The book Computer Numerical Control: Machining and Turning Centers ended up being making you to know about other expertise and of course you can take more information. It is rather advantages for you. The e-book Computer Numerical Control: Machining and Turning Centers is not only giving you more new information but also for being your friend when you really feel bored. You can spend your current spend time to read your publication. Try to make relationship using the book Computer Numerical Control: Machining and Turning Centers. You never feel lose out for everything in case you read some books.

Jacqueline Bull:

Information is provisions for people to get better life, information currently can get by anyone with everywhere. The information can be a expertise or any news even a huge concern. What people must be consider whenever those information which is within the former life are challenging to be find than now's taking seriously which one is suitable to believe or which one often the resource are convinced. If you find the unstable resource then you have it as your main information there will be huge disadvantage for you. All of those possibilities will not happen inside you if you take Computer Numerical Control: Machining and Turning Centers as the daily resource information.

Glady Curry:

People live in this new moment of lifestyle always try to and must have the spare time or they will get wide range of stress from both everyday life and work. So , if we ask do people have free time, we will say absolutely sure. People is human not really a huge robot. Then we question again, what kind of activity do you possess when the spare time coming to anyone of course your answer will certainly unlimited right. Then ever try this one, reading textbooks. It can be your alternative in spending your spare time, typically the book you have read is actually Computer Numerical Control: Machining and Turning Centers.

Gerard Norman:

Computer Numerical Control: Machining and Turning Centers can be one of your starter books that are good idea. We all recommend that straight away because this reserve has good vocabulary that could increase your knowledge in vocabulary, easy to understand, bit entertaining however delivering the information. The article writer giving his/her effort to set every word into satisfaction arrangement in writing Computer Numerical Control: Machining and Turning Centers however doesn't forget the main level, giving the reader the hottest and based confirm resource facts that maybe you can be one among it. This great information could drawn you into completely new stage of crucial imagining.

Read Computer Numerical Control: Machining and Turning Centers By Robert Quesada for online ebook

Computer Numerical Control: Machining and Turning Centers By Robert Quesada Free PDF d0wnl0ad, audio books, books to read, good books to read, cheap books, good books, online books, books online, book reviews epub, read books online, books to read online, online library, greatbooks to read, PDF best books to read, top books to read Computer Numerical Control: Machining and Turning Centers By Robert Quesada books to read online.

Online Computer Numerical Control: Machining and Turning Centers By Robert Quesada ebook PDF download

Computer Numerical Control: Machining and Turning Centers By Robert Quesada Doc

Computer Numerical Control: Machining and Turning Centers By Robert Quesada Mobipocket

Computer Numerical Control: Machining and Turning Centers By Robert Quesada EPub