BOOK REVIEWS

CALLING IN AN EXPERT

EXPERT SYSTEMS IN MANUFACTURING
Dimitris N Chorafas
Van Nostrand Reinhold
295pp, £36.50

What is an expert system? Indeed, what is artificial intelligence (AI)? Professor Chorafas gives an extensive definition of these techniques, and additionally of several similar and associated applications of modern management tools, such as knowledge engineering, computer-aided design, just in time (JIT), and computer integrated manufacturing.

But in a book of this size and cost there is not much beyond a good investigative journalist’s explanation of the advantages to be gained from the application of all of these tools to the problems of a modern manufacturing organisation.

There is no doubt that the author is an experienced industrial engineer; he has also written many books on the individual subjects described in the sixteen chapters of this volume. Nevertheless, here he leaves the overall impression of exhortation to commission experts in all of them to write programs to improve the productivity of the company.

In spite of the propaganda impression which is conveyed, the book does not read easily. Not, at any rate, to the British eye. It is heavily laced with very specialised jargon words. As a result, only those already fairly experienced in these matters can follow the advice rapidly or persist with the task of absorbing the good advice undoubtedly contained in such a wide survey of the available techniques.

Perhaps the title is somewhat misleading. Certainly it does not teach anyone how to write an expert system. But it is possible by studying those parts of the sixteen chapters to satisfy oneself that an expert system would be worthwhile to develop.

One excellent feature of the contents is the presentation of brief case studies of the applications of the techniques by large organisations in the United States and Japan. These are convincing and influential in the propaganda sense previously mentioned.

This book is worthwhile to any senior executive who is hesitant to accept the advice of an expert who recommended these techniques.

JV Connolly

QUALITY MOVES TO AUTOMATION AND INTEGRATION

QUALITY SYSTEMS
JDT Tannock
Chapman & Hall
1992, 233pp, £36.50
ISBN 0412409100

The intent of the author is to develop a direction in quality thinking, towards the flexible automation and integration of quality function activities within manufacturing.

He presents a framework for an integrated quality system in a manner compatible with current approaches on computer integrated manufacture (CIM) and total quality (TQ).

The content is divided into four parts.

Following a useful listing of acronyms (essential with today’s jargon), part one provides a brief survey of current themes in quality philosophy and strategy. Part two explores the design and improvement of quality systems, and part three reviews the technology available for automated inspection.

Part four in conclusion looks at quality data analysis and management.

The contents overall are presented in a logical, sequential style and the contents listing is very precise (in the manner of a manufacturing operations synopsis), providing easy reference to points of interest.

Each chapter begins with a useful introduction and in particular ends with a section on summary points or conclusions which should stimulate thought at the very least.

The reader should not be deterred by the frequent reference to automation with its poor image in historical perspective. The book presents a systematic approach to quality systems design, quality information collection and management, and extensive integration with other elements of the manufacturing system.

The author, in his final conclusions, emphasises the value of the approach in respect of the operational needs of the manufacturing function and the moves towards CIM and TQM. In this context, the exposed disparity in aims and needs between the two themes of CIM and TQM should not pass unnoticed.

This is recommended reading for the quality manufacturing engineer and associated personnel.

PN Day

CALLING BOOK REVIEWERS

Manufacturing Engineer is now featuring a book reviews page, and we now need people to act as reviewers.

If you are willing to act in this capacity please send your name and address, together with subjects for which you are willing to review books, to:

The Editor
Manufacturing Engineer
Michael Faraday House
Six Hills Way
Stevenage
Herts
SG1 2AY.

Although there is no fee payable, the reviewer’s name will appear with the review and the reviewer is welcome to retain the book.