

TOTAL QUALITY MANAGEMENT

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A Division of Visual Soft India Pvt. Ltd.

ISBN-13: 978-93-86258-47-2

FIRST EDITION, MAY 2017, INDIA

Typeset, Printed & Published by:
VSRD Academic Publishing
(A Division of Visual Soft India Pvt. Ltd.)

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Printed & Bound in India

VSRD ACADEMIC PUBLISHING

A Division of Visual Soft India Pvt. Ltd.

REGISTERED OFFICE

154, Tezabmill Campus, Anwarganj, KANPUR-208003 (UP) (IN)
Mb: 99561 27040, Web: www.vsrdpublishing.com, Email: vsrdpublishing@gmail.com

MARKETING OFFICE (NORTH INDIA)

Basement-2, Villa-10, Block-V, Charmwood Village, FARIDABAD-121009 (HY)(IN)
Mb: 98999 36803, Web: www.vsrdpublishing.com, Email: vsrdpublishing@gmail.com

MARKETING OFFICE (SOUTH INDIA)

340, FF, Adarsh Nagar, Oshiwara, Andheri(W), MUMBAI-400053 (MH)(IN)
Mb: 99561 27040, Web: www.vsrdpublishing.com, Email: vsrdpublishing@gmail.com

P R E F A C E

The importance of “**Total Quality Management**” is well known in various Engineering fields. This book covers TQM Principles, Tools, Techniques and Quality Assurance systems.

Quality is a necessary criterion for many professions to meeting its standard. In business, engineering and manufacturing, quality has a pragmatic interpretation as the non-inferiority or superiority of something. Quality is a perceptual, conditional, and somewhat subjective attribute and may be understood differently by different people. Consumers may focus on the specification quality of a product/service, or how it compares to competitors in the marketplace. Producers might measure the conformance quality, or degree to which the product/service was produced correctly.

Quality Tools are called as the basic tools because they are suitable for people with little formal training in statistics and because they can be used to solve the vast majority of quality-related issues.

In manufacturing, quality control is a process that ensures customers receive products free from defects and meet their needs. When done the wrong way, it can put consumers at risk. For example, the recent defect found in Takata airbags resulted in the biggest automotive recall in history. The recall includes almost 69 million airbag inflators and may cost billions of dollars. The recall will last until the end of 2019 and take until 2020 to resolve

Benefits of Using Quality Control Benefits the Customers to meet the expected and to make demands on high-quality products. When customers receive quality products you will improve Increase customer loyalty, Gain repeat business, Gain new customers from referrals, Maintain or improve your position in the market, Improve safety, Reduce liability risks and Contribute to overall positive branding of your product. Hence Quality control tool is very important. This book helps in pursuing the needs of quality in manufacturing and service sectors.

 *Dr. R. Nandhakumar*

ACKNOWLEDGEMENT

We wish to record our sincere gratitude to the Managing Director **Er. B. Maha Ajay Prasath**, Mahendra College of Engineering, for his constant encouragement and kind support in all our endeavors.

We deem it a proud privilege to extend our greatest sense of gratitude to **Dr. R Samson Ravindran**, Executive Director Mahendra Engineering Colleges for the inspiring guidance and valuable suggestions throughout the pursuance of this report.

We express our profound thanks to **Dr. R Asokan**, Principal, Mahendra College of Engineering, for his great enthusiasm and inspiration which enabled us to bring this venture to fruition.

We express our sincere thanks to **Dr. N. Malmurugan**, Dean Academics, Mahendra College of Engineering who extended their whole hearted cooperation and moral support for completion of this book.

We would like to express a special note of gratitude to the fantastic editing team of **VSRD Academic Publishing (A Division of Visual Soft India Private Limited)** in releasing this book.

Finally, this work would not have been possible without the love and support of **our colleagues, family members and friends**. We are extremely grateful to one and all.

 *Dr. R. Nandhakumar*



Thirumigu. M.G.BHARATHKUMAR

Founder & Chairman, Mahendra Educational Trust

Forward

"Computing in their capacity as a tool, computers will be but a ripple on the surface of our culture. In their capacity as intellectual challenge, they are without precedent in the cultural history of mankind".

-Edsger Dijkstra, 1972 Turing Award Lecture

Mechatronics Engineering as an academic discipline has evolved to embrace a set of intellectual challenges on a par with other sciences. This fact, combined with the undeniable impact of Mechatronics Engineering on the modern world, demands an introductory college text book comparable with commonly-used textbooks in physics, chemistry, or biology. Accordingly, this book is intended to meet the need for an introductory college text in Mechatronics Engineering. The distinctive feature of the book is that it has broader coverage of the field than is found in many texts that are currently in use.

I am delighted to note that the Faculties of Mechatronics Engineering of Mahendra College of Engineering Mr.R.Nandhakumar along have written this book on "Total Quality Management" nicely, for the benefit of student community. They have accomplished this goal, and I trust their work will encourage and enlighten all who have an interest in computers, computer science and the growing role on information and computer technology in the modern world.

M.G.BHARATHKUMAR

Founder & Chairman, Mahendra Educational Trust

**Dedicated
to
Our Family, Friends & Students**

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