MAINTENANCE ENGINEERING AND MANAGEMENT

R.C. Mishra
K. Pathak
MAINTENANCE ENGINEERING AND MANAGEMENT

SECOND EDITION

R.C. MISHRA
Former Director
Aryavart Institute of Technology and Management
Lucknow

K. PATHAK
Professor
Department of Mining Engineering
Indian Institute of Technology Kharagpur
Kharagpur

PHI Learning Private Limited
New Delhi-110001
2012
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The exploitation of knowledge and technology has resulted in the development of complex and sophisticated equipment and machinery in every field of engineering. These high investment systems, in turn, call for their effective utilization. The responsibilities of maintenance engineers have thus increased manifold. They have to keep such machines and systems in working order to meet production targets or service requirements.

In the Second Edition of this book, it has been our endeavour to incorporate the latest techniques and methodologies used today to maintain the equipment and facilities at a minimum cost.

The topics such as research and development in maintenance, the role of overhauling in maintenance, and expert systems in maintenance have been included in the introductory chapters. Condition monitoring has its own significance in maintenance and this has been dealt with in this book as well. The other maintenance practices such as maintenance scheduling, computerized maintenance planning, reliability indices, quality and reliability, reliability improvement and testing, instrumented equipment monitoring, and so forth, which are essential for improving the life expectancy of the machinery, have also been added. To optimize the maintenance costs, a maintenance audit procedure has been incorporated. Maintenance information which is a crucial aspect in decision making is also included. The role of the lubricants is most important in maintenance function and, hence, the use of hi-tech oils and lubricants has been discussed. Pollution also affects the functions of equipment and machinery, therefore, the topic on pollution prevention has been given due importance in the book.

Safety is important in every walk of human life. Its significance in maintenance has been highlighted. The maintenance of some of the important electrical machines has been discussed along with the maintenance of mechanical equipment.

Decision making is an important function in any organization, which is also true in the case of maintenance. This vital aspect of maintenance and management has been presented in detail in this edition. Advances in maintenance have been presented in a separate chapter.

Authors would appreciate receiving suggestions from the readers to further improve the content of the book with respect to modern developments in maintenance practices.

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