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Editorial Note

The first issue of the first volume of SAJMR received good response from the readers. The feedback received from the readers made us to improve the present issue.

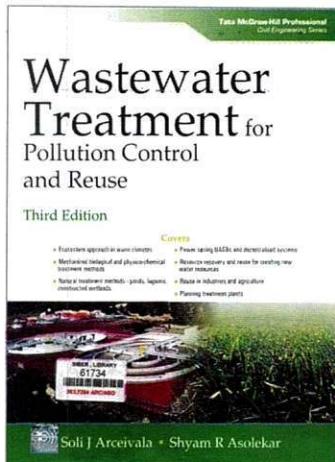
The present issue has broader scope than the earlier, yet we have kept the true spirit of the journal. In this issue we have included articles from the Computer Studies and Environmental Management field as well. As we have stated earlier, the objective of the journal is to provide a common platform for the practicing managers and academicians to share their research knowledge through this journal.

In future, we also welcome articles related to different pedagogical approach in management teaching. Many courses including management discipline everywhere use more of a traditional approach of lecturing to share the knowledge. Lecturing method is more passive in nature. Case study comes next to lecturing method in imparting knowledge. But not much has been done in developing experiential approach as a pedagogy of teaching in management field, particularly in India.

Experiential learning is more active rather than passive. The readers can contribute case studies and teaching material in experiential learning approach in different management fields such as marketing, human resources, organization behaviour, organizational change and development, strategic management, etc.

I am grateful to all the authors, reviewers and editorial members of the journal for their contribution and support in bringing out the second issue of first volume of the journal successfully.

Dr. Babu Thomas
Editor



Wastewater Treatment for Pollution Control and Reuse (Third Edition)

Author : Soli J. Arceivala and Shyam R. Asolekar

Publisher : Tata McGraw-Hill Publishing Company Limited, New Delhi

ISBN 13: 978-0-07-062099-5

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Pages: 518

Price: Rs. 595/-

This new book is a first of its kind, which completely satisfies the requirements of both environmental engineering and environmental sciences students. Its comprehensive discussion concerning the need for sensitivity towards the ecological environment in the context of sustainable development is unique. Divided in seventeen convenient chapters, this book covers:

- Essential scientific, ecological and legal backgrounds
- Polluted environment: water, air and soil
- Environmental engineering technologies
- Environmental management
- Water conservation and reuse in industries
- Sludge management
- Guidelines for planning and designing treatment plants and CETPs
- Facts about sustainable waste management

The traditional engineering areas of water, wastewater and solid waste treatment are examined in detail with fresh suggestions for solving problems of biosolids and landfill leachate. The topical concerns of hazardous and contaminated sites are discussed and the concepts of waste minimization and waste audits are introduced with particular reference to “reduce, reuse and recycle”.

- The special features of the book include:
- Simple, more cost-effective wastewater treatment methods
- A section on ground water recharge
- A special section on retrofitting sanitation in slums and shantytowns
- Water conservation reuse in industries and agriculture
- Case studies of wastewater treatment plants
- Numerous problems solved throughout
- An extensive reference list and glossary
- Interesting topics for research and development

This book is for....

The book is designed for the faculty as well as graduate students of environmental science and management, civil and chemical engineering. It also serves as a text in elective subject of environmental engineering to allied engineering fields at the under graduate level. These include - civil, chemical, mechanical, agriculture and food technology. Students of environmental science and management should find a wide range of material covered and its quantitative nature will benefit them. The quantitative approach with mathematical foundation and numerous examples and homework problems is essential for transition to environmental engineering. The book can also be of use to professionals from the industry as well as to consulting firms concerned with the control of water pollution and management, and reuse of wastewater. Information useful to pollution control agencies, municipal corporations and town planning department is also included.

The book contains....

The book starts with ecosystem approach to pollution control as its first chapter. It highlights the overall review of wastewater management in India with reference to wastewater characteristics and environmental impact assessment; and ends with strategies for control of pollution. The chapter is basically designed to introduce the environmental science, management and engineering students to the need for sensitivity towards the ecological environment. Most of the traditional engineering books are devoid of ecology studies. The second chapter is devoted to planning for wastewater collection and treatment. It also contains a detailed discussion on the choice of wastewater treatment methods, newer approach in wastewater collection and initial planning.

After providing an insight regarding the ecology/ecosystems concept in relation to control of pollution in the first component; the second major component deals with the aerobic biological treatment. In this, the design and choice of reactor is given in chapter three; while the next three chapters are dedicated to aerobic biological treatment methods, principles of aeration and principles of aerobic biological treatment. These chapters provide details

regarding various types of activated sludge processes, its oxygen requirement and related calculations. Nutrient removal from waste is discussed in-depth.

Up-flow anaerobic sludge blanket (UASB) digester and other anaerobic treatment processes have been dealt within chapter seven. It includes the review of UASB in India, its design parameters, gas recovery and commissioning of plant. Chapter eight deal with aerated lagoons, their types and design considerations. Detailed discussion is also given on the constructional features of the lagoons.

In the recent times, wastewater treatment by natural systems is gaining immense importance due to their various advantages. The next three chapters (from nine to eleven) deal with such aspects of wastewater treatment. It includes algal pond, hyacinth and duckweed ponds, fishponds, natural and constructed wetlands, vermiculture and ultimate use of treated wastewater for irrigation as treatment method. The information regarding design criteria, operation, maintenance and monitoring are also made available in a simple manner. Advanced treatment methods like ion exchange, carbon adsorption, disinfections and membrane processes have been discussed in chapter twelve. Some pages in this chapter are devoted for discussion on combined biological and physical-chemical treatment methods.

Management of sludge is an integral part of any wastewater treatment system. Chapter thirteen mainly concerns itself with solids settling and sludge management from wastewater treatment processes. The sludge composition, treatment and disposal are discussed from the point of view of ecologically sound disposal methods. Negative consequence of better wastewater treatment and better standards of liquid effluent is the key for generation of huge volumes of sludge. With the elimination of sea disposal route and the tightening up of lands spreading as a disposal method, innovative treatment and disposal methods are urgently required. Sludge and its fate are topical issues. By definition, 'clean sludge' and its use as a soil conditioner leads to alternative uses such as forest fertilizers, land reclamation, sacrificial land application and landscaping. The chapter examines such possibilities. Chapters fourteen and fifteen

covers water conservation and reuse in industry and agriculture along with water reuse in public water supplies. The chapter also highlights the recharging of ground water and deliberates on EIA process.

As far as the beginners in the field of wastewater treatment are concerned, it is essential for them to have an insight regarding planning and design of treatment plants along with the common effluent treatment plants (CETPs). The next two chapters, sixteen and seventeen deal with these aspects. Their content is related to waste minimization, life-cycle assessment and clean technologies. Normally, priority is given to waste minimization, particularly in relation to industry and its waste products in environmental planning.

References as well as material for further reading are cited substantially at the end of each chapter for the benefit of readers. Indexing is carried out for all the important terms used in the textbook.

The book contains enormous data in tabular and graphical form and illustrations, which help the readers understand the content easily and in-depth. The language used is very lucid and easy to understand.

In today's context, environmental engineering is a challenging development in interdisciplinary/multidisciplinary disciplines, particularly for the student community. It is now necessary that the environmental engineering/science undergraduates be exposed to the non-engineering environmental disciplines i.e. social sciences and law during the academic years. They then would not only be capable of negotiating with non-engineering professionals but would also be sensitive, in their own right, to other key players like public in environmental debates. Environmental engineering today addresses problems in water, air and soil environments. The book will open up new horizons for the students with aforesaid basic topics of relevance. The book contents form useful deliberations on such topics as ecology, microbiology, groundwater, solid waste, environmental impact assessment, and environmental management.

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