ENVIRONMENTAL ENGINEERING-I

WATER SUPPLY ENGINEERING

Dr. B. C. Punmia
Er. Ashok Kumar Jain
Dr. Arun K. Jain

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[CONTAINING 17 CHAPTERS]

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WATER SUPPLY ENGINEERING

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TO

LATE SHRI NIHAL CHAND JAIN

WHO TAUGHT US

THE VALUES OF LIFE

Preface to the Second Edition

Man's search for pure water began in prehistoric times. The quest for pure water can benefit the life and health of every one. Earlier, water treatment methods were developed almost entirely as an art rather than as a science. However, through the modern and new concepts in water purification processes, it has been possible to bring the wide spread water borne diseases under control. The resulting improvements in public health are great.

Water purification is now confronted with a myriad of difficult problems caused due to supply sources receiving greatly pollutional loads of domestic and industrial wastes. This book is an attempt to present those essential principles and present day practice necessary to solution of the problems of water collection water purification and water distribution. In the second Edition the book has been completely rewritten incorporating the latest developments and techniques on the subject. Chapter 1 of the book describes the water systems while chapter 2, 3 and 4 are on the development of water resources. Chapter 5 is devoted to the water demand and deter-mination of water quantity. Wat r quality aspects have been discussed in chapter 6. Chapter 7 introduces various unit operations used for water purification and waste water treatment. Chapter 8 is on screening and aeration of water. The principles and methods of sedimentation are given in chapter 9 while chapter 10 is devoted to filtration. Chapter 11 is on disinfection of water while chapter 12 is on softening of water. Miscellaneous treatment methods are given in chapter 13. Chapter 14 and 15 are on pumps and pumping, and conveyence of water. The distribution of purified water is given in Chapter 16. Lastly, Chapter 17 describes the water supply for buildings.

This book is not a treatise or a design manual. Instead, it is a text book written for engineering students at undergraduate and postgraduate levels. A large portion of the material presented

in this book has been derived from the works of others. Their contribution is greatly acknowledged. The recommendations of various Indian Standards on the subject, along with those of Manual on Water Supply and Treatment, prepared by the Central Public Health and Environmental Engineering Organisation under the Ministry of Urban Development, have been closely followed. Each chapter begins with clear statement of pertinent definitions, design principles, and theories and the design procedures. The basic principles are supplemented with numerous design examples and illustrations.

Further suggestions on the improvements of the book are welcome. The authors are thankful to Shri Mool Singh Gahlot and Shri Prem Singh Sankhla for the fine laser typesetting done by them.

JODHPUR
STHAPANA,
25TH SEP. 1995

B.C. PUNMIA
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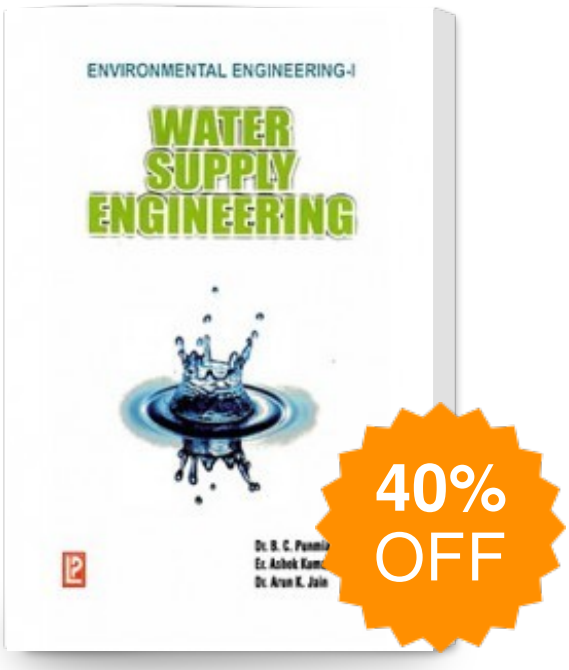
Water Supply Engineering



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