

## Khanna's Outlines of CHEMICAL & PETROLEUM ENGINEERING

<b>Author :</b>	Alapati Suryanarayana
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### Product Description

This book of chemical & Petroleum Engineering Contains of Various Topics. It covers different type of question with their Answers and Fill in the Blanks. Required data and equations are given for day to day calculations of Chemical Engineering topics. This book is necessary tool or an instrument for Chemical & Petroleum Engineers.



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## Table of Contents

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**Chapter 1:** Stoichiometry. **Chapter 2:** Mechanical Operations. **Chapter 3:** Fuels and Combustion. **Chapter 4:** Chemical Technology. **Chapter 5:** Fluid Mechanics. **Chapter 6:** Heat Transfer. **Chapter 7:** Mass Transfer. **Chapter 8:** Thermodynamics. **Chapter 9:** Chemical Reaction Engineering. **Chapter 10:** Instrumentation and Process Control. **Chapter 11:** Equipment Design and Economics. **Chapter 12:** Computers. **Chapter 13:** Petroleum Engineering. **Chapter 14:** Energy Conservation and Safety. **Chapter 15:** Optimization. **Chapter 16:** Environmental Engineering. **Chapter 17:** Summary of equations. **Chapter 18:** Mathematics. **Chapter 19:** Material Science and Engineering. **Chapter 20:** Corrosion Engineering. **Chapter 21:** Safety Engineering. **Chapter 22:** Petroleum Engineering (Multiple Choice Question). Appendix

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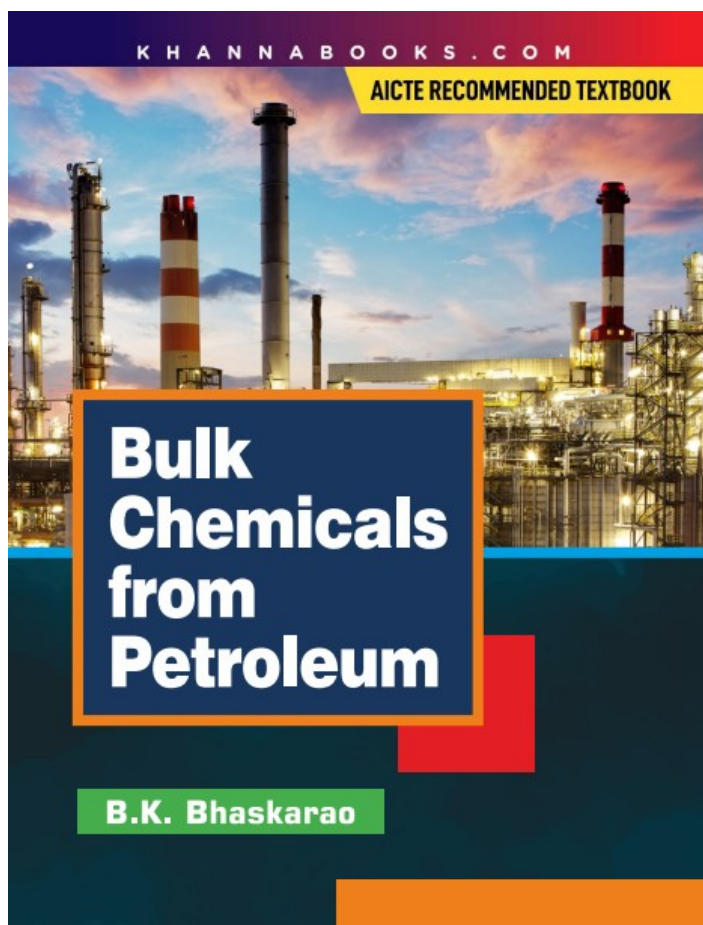
## Authors

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**Dr. Vikas Mahto** Dr. Vikas Mahto is an Associate Professor in the petroleum Engineering Department of Indian School Of Mines Dhanbad, India. He has received his Ph.D. degree in petroleum Engineering from Indian School of Mines Dhanbad in 2004. He is having more than 12 years of teaching experience in the field of Chemical Engineering and Petroleum Engineering. He is the author of more than 100 technical papers in different national/International journals 7 conferences of repute. He has completed three research projects sponsored by UGC-ISM, UGC New Delhi and CSIR New Delhi and currently working on collaborative project with Oil India India Ltd, Duliajan, Assam. He has filed two Indian Patents. He is the reviewer and member of editorial boards of many national and international journals. **Alapati Suryanarayana** Retired Professor & HOD Chemical Engineering Department N.I.T. Rourkela) Presently Prof. & HOD Chemical Engineering Department PRECET, Ex. Principal TRRECW Muthangi, Medak DK Telengana -502300

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## Bulk Chemicals from Petroleum

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<b>Country Origin :</b>	India

### Product Description

This book covers petrochemical industry feedstocks, chemicals derived from C1, C2, C3, C4 & higher hydrocarbon atoms, synthesis gas & chemicals and petroleum aromatics. Besides, it contains comprehensive information pertaining to polymers which include plastics, synthetic fibers & elastomers and synthetic detergents. This book will serve as as reference material for the student, teachers and practicing engineers in th field of chemical, petroleum and petrochemical engineering.



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## Table of Contents

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**Chapter 1:** Petrochemical Industry-Feedstocks. **Chapter 2:** Chemicals from Methane. **Chapter 3:** Chemicals from Ethane-Ethylene-Acetylene. **Chapter 4:** Chemical from C<sub>3</sub>,C<sub>4</sub> and Higher Carbon Atoms. **Chapter 5:** Synthesis Gas and Chemicals. **Chapter 6:** Polymers of Olefin. **Chapter 7:** Petroleum Aromatics. **Chapter 8:** Synthetic Fibers. **Chapter 9:** Synthetic Rubber. **Chapter 10:** Plastics. **Chapter 11:** Synthetic Detergents. **Chapter 12:** Petroleum Coke and Carbon Black. **Chapter 13:** Pollution and Toxicity.

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## Author

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**B.K. Bhaskarao**

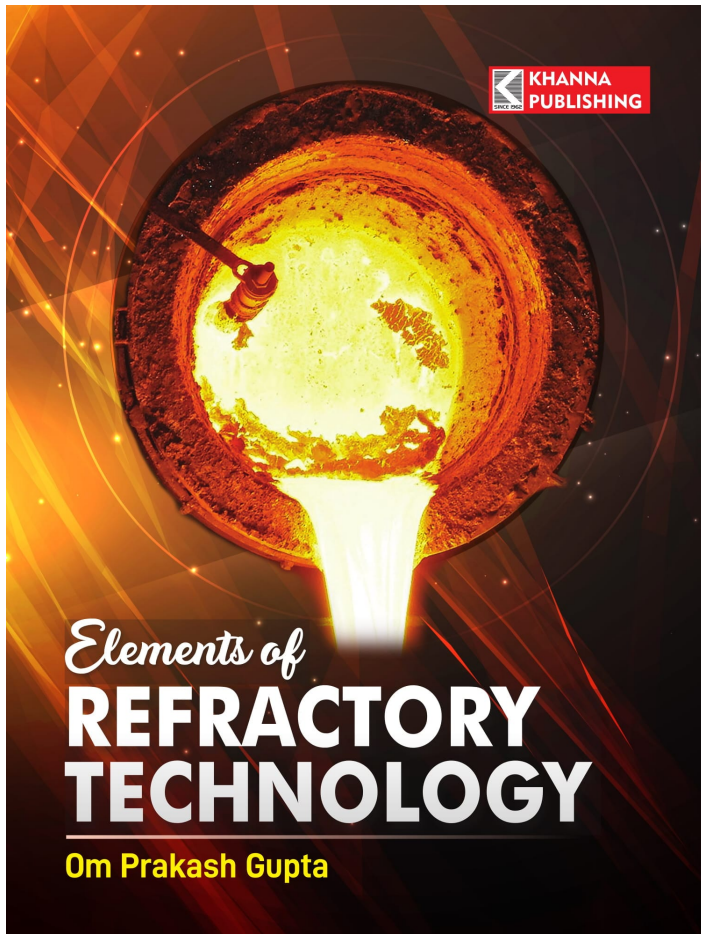
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## Elements of Refractory Technology

<b>Author :</b>	O.P. Gupta
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### Product Description

This book describes the essential features of refractory technology and is useful for degree & diploma courses in engineering. AMIE, AMIIM and IICHE examinations. Short question & answers and multiple choice question & answers drawn from the examination paper of various engineering colleges and professional bodies examinations given at the end of the book enhances its utility for the students.



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## Table of Contents

---

**Chapter 1:** Introduction to Refractories.

**Chapter 2:** Manufacture, Properties and Applications of Important Refractories.

**Chapter 3:** Refractories used in Various Furnaces/Industries.

**Chapter 4:** Properties Testing of Refractory.

**Chapter 5:** Phase Equilibrium in Refractory materials.

**Chapter-6:** Insulating Refractories / Ceramic fibres.

**Chapter-7:** Special Refractories.

**Chapter-8:** Refractory - Cements/Mortars, Castables Ramming Masses.

### Appendices

**Appendix-A:** Glossary of Terms (Related to Refractories).

**Appendix-B:** Short Question & Answers on Refractory Technology.

**Appendix-C:** Multichoice Questions & Answer on 'Refractory Technology.

**Appendix-D:** Technical Data on Refractories.

**Appendix-E:** References/Bibliography/Further Reading.

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## Author

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**Om Prakash Gupta** is basically being a chemical engineer, he has a practicing experience of efficient Energy management and HR functions in steel Industry for more than three decades. privileged to be the youngest writer of technical books in the country (for he had written his first book at the age of 24 years while doing M. Tech. at I.I.T Kanpur in 1979), he has authored many frontline books for engineering students. besides, being the regular faculty member in technical courses for Management Trainees (Technical), he has also visited England and France on a study tour sponsored by United Nations Development Program (UNDP) to study the scope of energy conservation in steel plants in 1987.

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AICTE Recommended Textbook as per Model Curriculum - 2018

# Process Heat Transfer and Chemical Equipment Design



D.C. Sikdar

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## Process Heat Transfer and Chemical Equipment Design

<b>Author :</b>	D.C. Sikdar
<b>ISBN 13 :</b>	978-93-86173-61-4
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## Product Description

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This book is students friendly. It also demonstrates how to solve the industry related problems that crop up in Chemical Engineering Practice. The chapters are organized in a simple way that enables the students to acquire an in depth understanding of the subject. The emphasis is given to the Basic concept of heat transfer, conduction, Insulations, Convection, Extended surface- Fins, Dimensionless group and Dimensional analysis, Heat transfer analogy, Heat transfer with phase change, Heat transfer equipment, Design of heat transfer equipment and Radiation, all coming under the realm of Process Heat Transfer. Apart from the numerous illustrations, the book contains review questions, exercises and aptitude test in Chemical Engineering which bridge the gap between theoretical learning and practical implementation. All numerical problems are solved in a systematic manner to reinforce the understanding of the concepts. This book is primarily intended as a text book for the under graduate students of Chemical Engineering. It will also be useful for other allied branches such as, Aeronautical Engineering, Mechanical Engineering, Petrochemical, Polymer Science and Engineering, Bio-technology as well as Diploma in Chemical Engineering. Key Features: \* Theoretical concept is explained with examples. \* Numerical problems are solved in systematic manner to reinforce the understanding of the concepts. \* Included a large number of diagrams illustrating industrial physical problems. \* Only essential theory is discussed under each topic. \* Stepwise procedure is given for solving problems under the topic of Chemical Equipment Design.

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## Table of Contents

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**Chapter 1:** Basic Concept at Heat Transfer. **Chapter 2:** Conduction. **Chapter 3:** Insulations. **Chapter 4:** Convection. **Chapter 5:** Extended Surface- Fins. **Chapter 6:** Dimensionless Group and Dimensional Analysis. **Chapter 7:** Heat Transfer Analogy. **Chapter 8:** Heat Transfer with Phase Change. **Chapter 9:** Heat Transfer Equipment. **Chapter 10:** Design of Heat Transfer Equipment. **Chapter 11:** Radiation. **Answer to Exercise Problems Aptitude Test in Heat Transfer Index**

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## Author

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**D. C. Sikdar** (Ph.D.) is an associate professor, Department of Chemical Engineering, Dayananda Sagar College of Engineering, Bangalore, with more than two and half decades of teaching experience. Prof. Sikdar has published many papers in national and international journals of repute. he has received Best Research Thesis Award from Karnataka State Bio-fuel Development Board for guiding M. Tech Thesis on "Development of Bio-Hydrogen Dependent Fuel Cell using Micro Algae" in 2012. Prof. Sikdar is also a member of Indian Society of Technical Education (ISTE) and Indian Institute of Chemical Engineers (IICE).



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ELEMENTS OF  
**CHEMICAL  
PROCESS  
TECHNOLOGY**

O.P. GUPTA

KHANNA PUBLISHING

## Elements of Chemical Process Technology

<b>Author :</b>	O.P. Gupta
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<b>Country Origin :</b>	India

### Product Description

This book will be useful for degree & diploma Curriculum of Engineering and for various associate membership examinations conducted by professional bodies like Institution of Engineers(AMIE) and Indian Institute of chemical Engineers (AMIICHE) etc. Salient Features of This Book \* Subject matter has been presented in simple, lucid & easy to understand language \* Covers all the topics included in the syllabus of various engineering colleges/Technical Institutes & professional bodies examination papers.



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## Table of Contents

---

**Chapter 1:** Water for industries and water treatment. **Chapter 2:** Acid industries: Sulphuric, Hydrochloric, Nitric and Phosphoric acids. **Chapter 3:** Alkali industries: Caustic soda, Sodium carbonate, Chlorine and Bleaching powder. **Chapter 4:** Fertilizers: Nitrogenous, phosphatic and potassic. **Chapter 5:** Glass and Ceramics. **Chapter 6:** Cement industry. **Chapter 7:** Refractories. **Chapter 8:** High Polymers- Plastics, Rubber and Fibers. **Chapter 9:** Petroleum Refinery. **Chapter 10:** Petrochemicals. **Chapter 11:** Oils and Fats: Refining, Hydrogenation, Fat splitting. **Chapter 12:** Soaps and Detergents. **Chapter 13:** Pulp and Paper industries. **Chapter 14:** Industrial fermentation- Ethyl alcohol. **Chapter 15:** Multiple choice Questions & Answers on Chemical Process Technology.

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## Author

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**Om Prakash Gupta** is basically being a chemical engineer, he has a practicing experience of efficient Energy management and HR functions in steel Industry for more than three decades. privileged to be the youngest writer of technical books in the country (for he had written his first book at the age of 24 years while doing M. Tech. at I.I.T Kanpur in 1979), he has authored many frontline books for engineering students. besides, being the regular faculty member in technical courses for Management Trainees (Technical), he has also visited England and France on a study tour sponsored by United Nations Development Program (UNDP) to study the scope of energy conservation in steel plants in 1987.

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