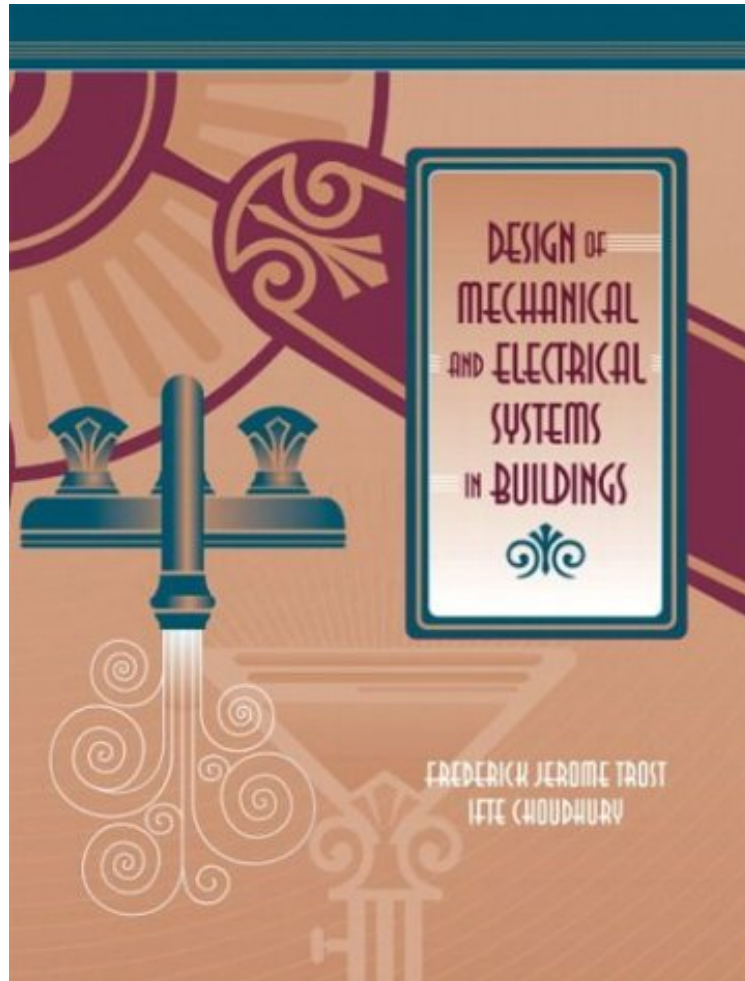


Design of Mechanical and Electrical Systems in Buildings

J. Trost, Ifte Choudhury

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J. Trost, Ifte Choudhury : Design of Mechanical and Electrical Systems in Buildings before purchasing it in order to gage whether or not it would be worth my time, and all praised Design of Mechanical and Electrical Systems in Buildings:

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Using a concise and logical format that explains fundamentals in very simple terms yet extensively this book helps readers develop a working knowledge of the design decisions, equipment options, and operations of different building

sub-systems. Readers will learn to design, size, and detail the different sub-systems installations, select fixtures and components, and integrate all the building sub-systems with site, building, foundations, structure, materials, and finishes. Organized into four parts, topics include: Lighting chapters cover perceptions, lamps, luminaries, and design examples. Electrical chapters explain the energy form that lights, heats, cools, and powers buildings. Heating, ventilating, and air conditioning chapters show how to calculate heating/cooling costs for home/office, determine the size of air distribution components, and how to consider HVAC options and zoning for home/office. Water and plumbing chapters introduces water demand for buildings, plumbing systems for buildings, methods of site waterscape, and plumbing fixtures and components. For architects, constructors, managers, occupants, and owners who wish to refine and improve their understanding of efficiency in building operation.

Excerpt. Reprinted by permission. All rights reserved. The snow melts on the mountain And the water runs down to the spring, And the spring in turbulent fountain, With a song of youth to sing, Runs down to the riotous river, And the river flows to the sea, And the water again Goes back in rain To the hill where it used wed to be. W R. Hearst, 1941

Efficient buildings provide shelter and comfort by selectively using or resisting natural energy flows. The fuel and electrical energy required to operate a building during its useful life will usually cost more than the building's construction. This book deals with efficient building design in terms of (1) lighting and electrical installations, (2) heating, ventilation, and air-conditioning, and (3) water supply and drainage sub-systems of a building. This book is a primer for students, architects, constructors, managers, occupants, and owners who wish to refine and improve their understanding of efficiency in building operation. Committed readers can develop a working knowledge of the design decisions, equipment options, and operations of different building sub-systems. Readers who study the text and complete review problems will be able to: Design, size, and detail the different sub-systems installations. Select fixtures and components. Integrate all the building sub-systems with site, building, foundations, structure, materials, and finishes. A secondary goal is to respect the reader's time, talent, and perception by presenting the materials in a concise, lucid format. Illustrations are included in the text to expand and reinforce the information presented, and actual building applications are emphasized for each topic covered. Study problems follow each chapter so that readers can develop confidence in their abilities to apply knowledge and skills. Fundamentals of lighting, perceptions, design, and examples are presented in Part I. Part II explains electrical energy that lights, heats, cools, and powers buildings. Chapters 14 through 18 in Part III will allow the reader to build a knowledge base concerning comfort, heat flow, building heating-cooling equipment, and system selection. Chapter 19 presents a method for predicting annual building heating-cooling costs, and Chapters 20 and 21 outline opportunities for designing efficient buildings based on a working knowledge of heat flow. Chapters 22 to 24 in Part IV cover general discussions about water supply, building and site drainage, site irrigation, waterscape, and methods and principles of building plumbing. Chapter 25 details plumbing installations in example residence and office occupancies, and Chapter 26 outlines plumbing work for fire and HVAC applications.