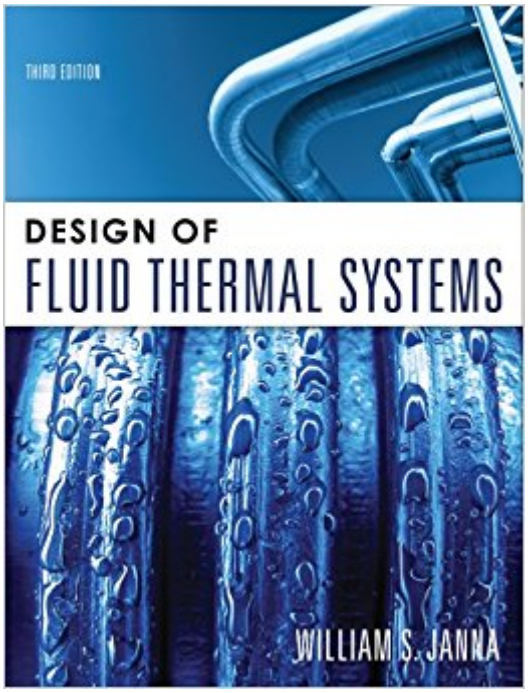
Design Of Fluid Thermal Systems



Synopsis

This book is designed to serve senior-level engineering students taking a capstone design course in fluid and thermal systems design. It is built from the ground up with the needs and interests of practicing engineers in mind; the emphasis is on practical applications. The book begins with a discussion of design methodology, including the process of bidding to obtain a project, and project management techniques. The text continues with an introductory overview of fluid thermal systems (a pump and pumping system, a household air conditioner, a baseboard heater, a water slide, and a vacuum cleaner are among the examples given), and a review of the properties of fluids and the equations of fluid mechanics. The text then offers an in-depth discussion of piping systems, including the economics of pipe size selection. Janna examines pumps (including net positive suction head considerations) and piping systems. He provides the reader with the ability to design an entire system for moving fluids that is efficient and cost-effective. Next, the book provides a review of basic heat transfer principles, and the analysis of heat exchangers, including double pipe, shell and tube, plate and frame cross flow heat exchangers. Design considerations for these exchangers are also discussed. The text concludes with a chapter of term projects that may be undertaken by teams of students.

Book Information

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Customer Reviews

This book is an exceptional follow up to the fluid dynamics publication by the same author. The material in this text is presented in a very straightforward manner which any mechanical engineer

should be able to comprehend and apply. This is a must have for the engineer who wishes to design functional fluid thermal systems. This is my second copy.

This book had so many errors (ie. typos and incorrect formulas) that we were told to use the formulas from another book. Some of the examples are useful, and the step-by-step instructions are a great start for certain types of problems.

The content of this book is easily read for me!! It contains almost all practical equations and criteria in the field of thermal system design. The most important point I like the book is that it has really help me a lot with my work in many times. It is so suit to asist engineers in preliminary design of fluid thermal system.

Above Average review of thermal fluid fundamentals. Recommended for the beginning pipeline engineer.

Great if you don’t mind spending about $40 more than the paperback international edition. I normally get international editions, but since i only took two classes that semester, I splurged to avoid the hassle of making copies of the appendix tables and unscrambling the homework problems

Press) PE Mechanical Engineering: Thermal and Fluids Practice Exam Procesamiento termico de frutas y hortalizas / Thermal Processing of Fruits and Vegetables (Spanish Edition)