How Buildings Work: The Natural Order Of Architecture
Illustrated with hundreds of illuminating line drawings, this classic guide reveals virtually every secret of a building's function: how it stands up, keeps its occupants safe and comfortable, gets built, grows old, and dies--and why some buildings do this so much better than others. Drawing on things he's learned from the many buildings he himself designed (and in some cases built with his own hands), Edward Allen explains complex phenomena such as the role of the sun in heating buildings and the range of structural devices that are used for support, from trusses and bearing walls to post-tensioned concrete beams and corbeled vaults. He stresses the importance of intelligent design in dealing with such problems as overheating and overcooling, excessive energy use, leaky roofs and windows, fire safety, and noisy interiors. He serves up some surprises: thermal insulation is generally a better investment than solar collectors; board fences are not effective noise barriers; there's one type of window that can be left open during a rainstorm. The new edition emphasizes "green" architecture and eco-conscious design and construction. It features a prologue on sustainable construction, and includes new information on topics such as the collapse of the World Trade Center, sick building syndrome, and EIFS failures and how they could have been prevented. Allen also highlights the array of amazing new building materials now available, such as self-cleaning glass, photovoltaics, transparent ceramics, cloud gel, and super-high-strength concrete and structural fibers. Edward Allen makes it easy for everyone--from armchair architects and sidewalk superintendents to students of architecture and construction--to understand the mysteries and complexities of even the largest building, from how it recycles waste and controls the movement of air, to how it is kept alive and growing.
Customer Reviews

I bought this book in the hope that it will be talking about Heating/Cooling, Lighting/Acoustics in some detail and touch upon other topics as well. The book however was disappointing because it covered too many topics without getting into significant depth for any of them. After reading the book, one can only be satisfied enough as after reading a magazine or sketchbook on the mechanics of architecture. Another point of contention is that the material presented is rather dated and the contemporary reader would want to know more about some of the issues that are becoming increasingly relevant for architecture today, like sustainability and resource consumption/climate change. Even the issues presented here have seen a lot more development and upgrades than are introduced to the reader. This review however should not discourage people who are interested in the practice of architecture and want to know more about the discipline. The sketches and diagrams are beautiful and the book would be a great resource for readers in high school who would like to know more about architecture before taking it up as a career choice. It would also be beneficial to students in the first semester in undergraduate architectural education who need to be introduced to the various aspects involved in putting together a building. But not beyond. There are other, so much better books out there for gaining knowledge about things in a contemporary setting. A highly recommended book is: Heating, Cooling, Lighting: Sustainable Design Methods for Architects.

Download to continue reading...