



# Guide to Hydronics

by Richard Trethewey



**Modern Hydronic Heating for Residential and Light Commercial Buildings** by John Siegenthaler (Delmar Publishers, 1995; 800/347-7707). Hardcover,

8<sup>3</sup>/<sub>4</sub>x11<sup>1</sup>/<sub>4</sub>, 449 pages. \$54.95.

John Siegenthaler has created the definitive textbook on hot-water heating. *Modern Hydronic Heating* is a reference manual containing all the things an installer or designer of a hydronic system needs to know. (Hydronic heating means using water to carry heat to all parts of the house. Once there, it can release that heat through baseboard radiators, fan coil units, radiant slabs, and even pool, spa, or whirlpool heating.)

Siegenthaler has written the right book at the right time. In the colder climates, hydronics continues to gain in popularity over forced-air systems. This is driven in part by increasing concern for indoor air quality and the health effects of dirty ductwork, and by problems associated with the physical size of traditional ductwork.

Anybody involved with the heating industry should have this book on his shelf. Heating systems are often designed in this country based on the anticipated heating load — plus a safety factor that often approaches 100%. Some designers also size systems based on “what our fathers did before us.” Siegenthaler’s book teaches the right way to establish the size of system needed for a particular house.

It is a very thorough manual. Each component in a heating system is described individually and then brought into the discussion later to add to the reader’s understanding of how it works as a part of the system. It is this

system approach that has been lacking in modern-day training and that helps make this book so useful.

But this book is not just for heating contractors. Today, progressive builders have to know as much about heating and cooling systems as they do about moisture barriers or windows. This is the book that explains the how *and* the why.

One subject covered especially well is radiant floor heating. Radiant is the perfect heating method for the combination family room/kitchen that everybody wants — 30 feet to the peak, north-facing glass, floor-to-ceiling cabinets. The text explains the physiology (the why) of radiant heating as well as the many design and installation details (the how).

Siegenthaler discusses different boilers, pumps, tanks, and accessories with a reasoned and balanced approach. I particularly like his attention to the control methods of modern heating systems. He explains how to change the system water temperature according to the changing outdoor weather using simple and affordable controls. Siegenthaler has done a first-class job of making these controls understandable.

In reading *Modern Hydronic Heating*, I kept trying to catch something that the author missed. Did he address pump sizing, pipe sizing, heat-loss calculations? The more I checked, the more impressed I was. Like the TV commercial for spaghetti sauce, it was “all in there.”

*Modern Hydronic Heating* is one of those books that belongs on the reference shelf of anyone interested in the heating of homes or buildings for the next 30 years. At that point, I hope Siegenthaler will come out with another edition. ■

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