

## Process Modeling References: Magazines

- 1 Paul, Brayton O. Software Removes Bottleneck, Optimizes Butadiene Process *Chemical Processing* June 1993
- 2 Horwitz, Benjamin A. Make the Most of Process Design Software *Chemical Engineering Progress* January 1994 Pages 54-57
- 3 Horwitz, Benjamin A. Don't Let Startup or Degugging Problems Bug You *Chemical Engineering Progress* November 1994 Pages 62-64
- 4 Horwitz, Benjamin A. Avoid Nausea When Solving Dynamic Problems *Chemical Engineering Progress* March 1996 Pages 44-51
- 5 Carlson, Eric C. Don't Gamble with Physical Properties for Simulations *Chemical Engineering Progress* October 1996 Pages 35-45
- 6 Horwitz, Benjamin A. Optimize Pressure Swing Distillation *Chemical Engineering Progress* April 1997 Pages 47-51
- 7 Frank, Timothy C. Break Azeotropes With Pressure Swing Distillation *Chemical Engineering Progress* April 1997 Pages 52-63
- 8 Horwitz, Benjamin A. The Case of the Collapsing Can *Chemical Engineering Progress* June 1997 Pages 61-66
- 9 Schad, Ryan C. Make the Most of Process Simulation *Chemical Engineering Progress* Vol. 94, No. 19 January 1998 Pages 21-27 *Follow the tips of experts to take fuller advantage of your simulation software.* <http://www.aiche.org/publications/cep/pdf/9801scha.pdf>
- 10 Mukherjee, Rajiv Effectively Design Shell and Tube Heat Exchangers *Chemical Engineering Progress* Vol. 94, No. 2 February 1998 Pages 21-37 *To make the most of exchanger design software, one needs to understand STHE classification, exchanger components, tube layout, baffling, pressure drop, and mean temperature difference* <http://www.aiche.org/publications/cep/pdf/9802mukh.pdf>
- 11 Mukherjee, Rajiv Broaden Your Heat Exchanger Design Skills *Chemical Engineering Progress* Vol. 94, No. 3 March 1998 Pages 35-43 *After mastering the basics of shell-and-tube heat exchanger design, you're ready to tackle the advanced topics covered here: allocation of shellside and tubeside fluids, use of multiple shells, overdesign, and fouling.*
- 12 Schneider, Donald F. Build a Better Process Model *Chemical Engineering Progress* Vol. 94, No. 4 April 1998 Pages 75-85 *An organized approach is required to develop a robust and accurate simulation. Here's how to proceed.*

- 13 Linkson, Peter B. Can You trust your Aqueous System Simulations? *Chemical Engineering Progress* Vol. 94, No. 5 May 1998 Pages 63-68 *Most chemical engineers don't appreciate the peculiarities of process engineering of an aqueous system. So, they cannot make informed decisions when developing simulations. The result, too often, is modeling mayhem.*
- 14 Horwitz, Benjamin A. Hardware, Software, Nowhere *Chemical Engineering Progress* Vol. 94, No. 9 September 1998 Pages 69-74 *Even the most powerful and sophisticated computer programs never can compensate for lack of chemical engineering expertise and experience.*
- 15 Schneider, Donald F Select the Right Hydrocarbon Molecular Weight Correlation *Chemical Engineering Progress* December 1998, Vol. 94, No. 12 Page 40 *Understand how different techniques produce different results, and how that affects process simulation, design, and operation.*
- 16 Bokis, Costas P.; Obrey, Hasan Chen, Chau-Chyun Properly Model Polymer Processes *Chemical Engineering Progress* April 1999, Vol. 95, No. 4 - Pg.39 *Succeeding in such simulations requires adequately dealing with some issues unique to polymer systems.*
- 17 Phillips, Jonathan E. DeCicco, Jeffery D. Choose the Right Mathematical Software - *Chemical Engineering Progress* July 1999, Vol. 95, No. 7 Pg.69 *Here's how five popular programs compare*  
<http://www.aiche.org/publications/cep/pdf/9907phil.pdf>
- 18 Liu, Yunda and Watanasiri, Sophat Successfully Simulate Electrolyte Systems *Chemical Engineering Progress* Vol. 95, No. 10 October 1999 Pages 25-42 *Modeling processes containing electrolytes can be tricky. Here are guidelines to help you get the right results.*  
<http://www.aiche.org/publications/cep/pdf/9910wata.pdf>
- 19 Horwitz, Benjamin A. Process Design: Through the Looking Glass *Chemical Engineering Progress* Vol. 95, No. 10 October 1999 Pages 69-73 *When your plant is operating like something from Wonderland, use design equations backwards to move your troubleshooting forward.*  
<http://www.aiche.org/publications/cep/pdf/9910horw.pdf>
- 20 Harvey, Allan H; Parry William T. Keep Your "Steam Tables" Up-to-Date - *Chemical Engineering Progress* November 1999, Vol. 95, No. 11 Pg.45 *Improved methods of calculating water and steam properties can provide more-accurate data for critical applications.* Allan H. Harvey, William T. Parry

### **Helpful Books**

Kister, Henry Z **Distillation Operations** McGraw Hill Text; ISBN: 0070349096

Kister, Henry Z **Distillation Design** McGraw Hill Text; ISBN: 0070349096

Wallace, **Equilibrium Thermodynamics** Butterworth

Turton, Richard; Bailie, Richard; Whiting, Wallace B.; Shaeiwitz, Joseph A. **Analysis, Synthesis and Design of Chemical Processes** Prentice Hall ISBN: 0-13-570565-7

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