

Chapter 13: Bibliography

- Aldrich, C. (1997) "Analysis and modeling of pulp viscosity in batch digester 11"
Internal Report: SAPPI SAICCOR, Umkomaas.
- Beharic, S. (1994) "Digesters: Wood chips and cooking liquor loading" Internal report:
SAPPI SAICCOR, Umkomaas.
- Bierman, C. J. (1996) *Handbook of Pulping and Papermaking*, 2nd ed., Academic
Press, California.
- Bryce, J. R. G. (1980) "Sulfite Pulping" In *Pulp and paper: Chemistry and chemical
technology*, Vol. 1 (Ed, Cassey, J. P.) 1st ed., John Wiley and Son, Chichester.
- Demuth, H. and Beale, M. (1998) "Neural network toolbox" The Mathworks, Natick.
- Dirion, J. L., Cabassud, M., Lann, M. V. L. and Casamatta, G. (1996) "Development of
adaptive neural networks for flexible control of batch processes", *The Chemical
Engineering Journal*,(S), **63**, S797 - S802.
- Dong, D. and MacAvoy, T. J. (1996) "Batch tracking via nonlinear principal component
analysis", *AIChE Journal*,(8), **42**, 2199 - 2208.
- Eaton, J. W. and Rawlings, J. B. (1990) "Feedback control of chemical processes
using on-line optimization techniques", *Computers and Chemical Engineering*,
(4),**14**, 469.
- Fourie, S. H. (1999) "An introduction to the application of neural networks in process
control" University of Pretoria, Pretoria.
- Genco, J. M. (1996) "Pulp" In *Kirk-Othmer Encyclopedia of Chemical Technology*, Vol.
20 (Eds, Kroschwitz, J. I. and Howe-Grant, M.) 4th ed., John Wiley and Sons,
Chichester.
- Glasser, W. G. (1979) "Lignin" In *Pulp and Paper: Chemistry and Chemical
Technology*, Vol. 1 (Ed, Casey, J. P.) 3rd ed., John Wiley and Sons, London.
- Hagberg, B. and Schöön, N.-H. (1973) "Kinetical aspects of the acid sulfite cooking
process: Part 1: Rates of dissolution of lignin and hemicellulose", *Svensk
Papperstidning*,(15), **76**, 561-568.
- Hagberg, B. and Schöön, N.-H. (1974a) "Kinetic aspects of the acid sulfite cooking
process. Part 2: Rate of formation of strong acids", *Svensk Papperstidning*,(4),
77, 127-130.
- Hagberg, B. and Schöön, N.-H. (1974b) "Kinetical aspects of the acid sulfite cooking
process. Part 3: Mathematical simulation of cooks", *Svensk
Papperstidning*,(15), **77**, 557 - 562.

- Hanish, H.-M. (1994) "Discrete models of the dynamic behaviour of batch plant", *Computers and Chemical Engineering*,(S), **18**, S403-S407.
- Haxthausen, N. (1995) "The painkillers for batch control headaches", *Chemical Engineering*,(October), 119 - 124.
- Helm, R. (1999a) "Carbohydrates and Polysaccharides", <http://www.chem.vt.edu/chem-dept/helm/3434WOOD/notes1/carbo.html>, Virginia Polytechnic Institute and State University.
- Helm, R. (1999b) "Cellulose", <http://www.chem.vt.edu/chem-dept/helm/3434WOOD/notes1/cellulose.html>, Virginia Polytechnic Institute and State University.
- Helm, R. (1999c) "Kraft pulping", <http://www.chem.vt.edu/chem-dept/helm/3434WOOD/notes1/kraft.html>, Virginia Polytechnic Institute and State University.
- Helm, R. (1999d) "Reactions of polysaccharides", <http://www.chem.vt.edu/chem-dept/helm/3434WOOD/notes1/polyxn.html>, Virginia Polytechnic Institute and State University.
- Juba, M. R. and Hamer, J. W. (1986) "Chemical Process Control - CPCIII" (Eds, Morari, M. and McAvoy, T. J.).
- Karlsson, O. and Westermark, U. (1996) "Evidence of chemical bonds between lignin and cellulose in kraft pulps", *Journal of pulp and paper science*,(10), **22**, J397 - J401.
- Kollman, F. F. P. and Côté, W. A. (1968) *Principles of Wood Science and Technology*, 1 ed., Springer-Verlag New York Inc., New York.
- Levenspiel, O. (1972) *Chemical Reaction Engineering*, 2nd ed., John Wiley and Sons, New York.
- Lin, L. I.-K. (1989) "A concordance correlation coefficient to evaluate reproducibility", *Biometrics*,(March), **45**, 255-268.
- Luyben, W. L. (1990) *Process Modeling, Simulation and Control for Chemical Engineers*, 2nd ed., McGraw-Hill International editions, Singapore.
- Marr, S. Y. and Bondy, W. B. (1986) "Application of viscosity prediction model in sulphite pulping" In *CPPA/TAPPI International Sulphite Conference Quebec*.
- McGinnis, G. D. and Shafizadeh, F. (1979) "Cellulose and hemicellulose" In *Pulp and Paper: Chemistry and Chemical Technology*, Vol. 1 (Ed, Casey, J. P.) 3rd ed., John Wiley & Sons, Chichester.
- McGovern, J. N. (1979) "Pulping" In *Pulp and Paper: Chemistry and Chemical Technology*, Vol. 1 (Ed, Casey, J. P.) 3rd ed., John Wiley and Sons, Chichester.
- Meneghel, C. (1998a) "Historical review of the existing model's capability" Internal report: SAPPI SAICCOR, Umkomaas.
- Meneghel, C. (1998b) "Investigation fo the digester cooking model from an operational point of view" Internal report: SAPPI SAICCOR, Umkomaas.
- Meneghel, C. (1999) "Digester control" Internal report: SAPPI SAICCOR, Umkomaas.

- Patt, R. and Kardsachia, O. (1991) "Pulp" In *Ullmann's Encyclopedia of Industrial Chemistry*, Vol. A18 (Eds, Elvers, B., Hawkins, S. and Shulz, G.) 5th ed., VCH Publishers.
- Pauponis, M. A. and Krishnagoplan, A. (1991) "Adaptive inferential control of kraft batch digesters as based on pulping liquor analysis", *Tappi Journal*,(6), **74**,169 - 175.
- Pellow-Jarman, M. (1997) "Correlations between viscosities at cook end and cooking conditions on Digester 11" Internal report: SAPPI SAICCOR, Umkomaas.
- Pellow-Jarman, M. (1998) "Neural network analysis of digester 11 data including 4 hour liquor strength and 5,25 hour liquor colour" Internal report: SAPPI SAICCOR, Umkomaas.
- Prescott, D. M. (1988) *Cells*, 1st ed., Jones and Bartlett Publishers.
- Proctor, A. R., Yean, W. Q. and Goring, D. A. (1967) *Pulp and Paper Magazine of Canada*,**68**.
- Rippen, D. W. T. (1983) "Simulation of single- and multiproduct batch chemical plants for optimal design and operation", *Computers and Chemical Engineering*,(3), **7**, 137-156.
- Rydholm, S. A. (1965) *Pulping processes*, 1st ed., Interscience Publications, London.
- Salmén, L. and Olsson, A.-M. (1998) "Interaction between hemicelluloses, lignin and cellulose: Structure - Property relationships", *Journal of pulp and paper*,(3), **24**, 99 - 103.
- SAPPI (1999) <http://www.sappi.co.za/>, 20 September 1999.
- Shacham, M. (1996) "Application of feedback control principles for solving differential-algebraic systems of equations in process control education", *Computers and Chemical Engineering*,(Supplement), **20**, S1329 - S1334.
- Sloan, T. H. (1982a) "Acid Hydrolysis of cellulose in sulfite pulping" Internal Report: ITT Rayonier Incorporated.
- Sloan, T. H. (1982b) "Activation energy for delignification in acid bisulfite pulping" ITT Rayonier Inc.
- Sloan, T. H. (1982c) "Activation energy for hemicellulose dissolution in sulfite pulping" ITT Rayonier Inc.
- Smith, J. M. (1981) *Chemical Engineering Kinetics*, 3rd ed., McGraw-Hill International Editions, Singapore.
- Smith, S. (1998) "Saiccor batch digester model development - Phase 1" Internal report: PiTEC, Randburg.
- Smook, G. A. (1994) *Handbook for Pulp and Paper Technologists*, 2nd ed., Angus Wilde Publications.
- Stephanopoulos, G. (1984) *Chemical Process Control: An Introduction to Theory and Practice*, 1 ed., Prentice Hall International Editions, New Jersey.
- Terwiesch, P. and Agarwal, M. (1995) "A discretized nonlinear state estimator for batch processes", *Computers and Chemical Engineering*,(2), **19**, 238 - 258.

- Terwiesch, P., Agarwal, M. and Rippen, D. W. T. (1994) "Batch unit optimization with imperfect modeling: a survey", *Journal of Process Control*,(4), **4**, 238-258.
- Wang, Z. L., Corriou, J. P. and Pla, F. (1994) "Nonlinear adaptive control of batch polymerisation", *Computers and Chemical Engineering*,, **18**.
- Watson, E. (1992) "Mathematical modeling and experimental study of the kinetics of the acid sulphite pulping of Eucalyptus wood" In *Department of Chemical Engineering* University of Natal, Durban.
- Willis, M. J., Montague, G. A., Massimo, C. d., Tham, M. T. and Morris, A. J. (1992) "Artificial neural networks in process estimation and control", *Automatica*,, **28**.
- Wilson, J. A. and Martinez, E. C. (1997) "Neuro-fuzzy modeling and control of a batch process involving simultaneous reaction and distillation", *Computers and Chemical Engineering*,(Supplement),(S), **21**, S1233 - S1238
- Yorston, F. H. and Liebergott, N. (1965) "Correlation of the rate of sulphite pulping with temperature and pressure", *Pulp and Paper Magazine of Canada*,(May), **66**, T-272.