
7 REFERENCIAS

REFERENCIAS

- [1] Weingartner, H.; Franck, E. U. (2005). Supercritical water as a solvent. *Angewandte Chemie, International Edition*, 44(18), 2672-2692.
- [2] Tester, J. W.; Holgate, H. R.; Armellini, F. J.; Webley, P. A.; Killilea, W. R.; Hong, G. T.; Barner, H. E. (1993). Emerging technologies in hazardous waste management III. *ACS Symposium Series*, 518, 35-75.
- [3] Li, L.; Chen, P.; Gloyna, E. F. (1991). Generalized kinetic model for wet oxidation of organics compounds. *AIChE Journal*, 37 (11), 1687-1697.
- [4] Shaw, R. W.; Brill, T. B.; Clifford, A. A.; Echert, C. A.; Frank, E. U. (1991). Supercritical water. A medium for chemistry. *Chemical and Engineering News*, 23, 26-39.
- [5] Modell, M.; Larson, J.; Sobczynski, F. (1992). Supercritical water oxidation of pulp mill sludges. *Tappi Journal*, 75 (6), 195-202.
- [6] Steeper, R. R. ; Rice, S. F. (1993). Supercritical Water oxidation of hazardous wastes. 31st Aerospace Sciences Meeting & Exhibit, AIAA 93-0810, January, Reno, NV.
- [7] Li, L.; Gloyna, E. F.; Sawicki, J. E. (1993b). Treatability of DNT process wastewater by supercritical water oxidation. *Water Environment Research* Washington, 65(3), 250-257.
- [8] Staszak, C. N.; Malinowski, K. C.; Killilea, W. R. (1987). The pilot-scale demonstration of the MODAR process for the destruction of hazardous organic waste materials. *Environ. Progress*, 6 (1), 39.
- [9] Pisharody, S. A. ; Fisher, J. W. ; Abraham, M. A. (1996). Supercritical water oxidation of solid particulates. *Ind. Eng. Chem. Res.*, 35, 4471- 4478.
- [10] Houser, T. J.; Zhou, Y. ; Liu, X. (1996). The destruction of selected hazardous compounds using supercritical water. *J. Supercritical Fluids*, 9, 106-112.
- [11] Goto, M. ; Nada, T. ; Ogata, A. ; Kodama, A. ; Hirose, T. (1998). Supercritical water oxidation for the destruction of municipal excess sludge and alcohol distillery wastewater of molasses. *Journal of Supercritical Fluids*, 13, 277-282.
- [12] Goto, M.; Nada, T.; Kodama, A.; Hirose, T. (1999a). Kinetic analysis for destruction of municipal sewage sludge and alcohol distillery wastewater by supercritical water oxidation. *Ind. Eng. Chem. Res.*, 38, 1863-1865.
- [13] Motonobu, G.; Daisuke, S.; Akio, K.; Tsutomu, H. (1999). Kinetic analysis for ammonia decomposition in supercritical water oxidation of sewage sludge. *Industrial & Engineering Chemistry Research*, 38(11), 4500 – 4503.
- [14] Erkonak, H.; Sogut, O. O.; Akgun, M. (2008). Treatment of olive mill wastewater by supercritical water oxidation. *Journal of Supercritical Fluids*, 46 (2), 142-148.

- [15] Martín, M. I. (1998). Oxidación húmeda y en agua supercrítica de disoluciones acuosas de compuestos modelo y de aguas residuales industriales. Tesis Doctoral. Universidad Complutense de Madrid.
- [16] Alonso, E.; Cocero, M. J. ; Torio, R. ; Vallelado, D. ; Fdz-Polanco, D. ; Fdz-Polanco, F. (1999). Supercritical water oxidation of a dyestuff wastewater in pilot plant. Proceedings of the 6th meeting on supercritical fluids, chemistry and materials. Abril, Nottingham, U.K., 443-448.
- [17] Drews, M. J.; Barr, M.; Williams, M. (2000). A kinetic study of the SCWO of a sulfonated lignin waste stream. *Ind. Eng. Chem. Res.*, 39, 4784-4793.
- [18] Portela, J. R.; López, J.; Nebot, E.; Martínez de la Ossa, E. J. (2001a) .Elimination of cutting oil wastes by promoted hydrothermal oxidation. *Journal of Hazardous Materials*, B88, 95-106.
- [19] Portela, J. R.; Nebot, E.; Martínez de la Ossa, E. (2001b). Generalized kinetic models for supercritical water oxidation of cutting oil wastes. *J. Supercritical Fluids*, 21, 135-145.
- [20] Sánchez-Oneto, J. (2005). Estudio y modelización de un proceso para la eliminación de los residuos de las industrias de mecanizado mediante oxidación en agua sub- y supercrítica. Tesis doctoral. Universidad de Cádiz. España.
- [21] Chen, G.; Lei, L.; Hu, X.; Yue, P. L. (2003). Kinetic study into the wet air oxidation of printing and dyeing wastewater. *Separation and Purification Technology*, 31, 71-76.
- [22] Shanableh, A. (2005). Generalized first-order kinetic model for biosolids decomposition and oxidation during hydrothermal treatment. *Environ. Sci. Technol.*, 39, 355-362.
- [23] Veriansyah, B.; Park, T-J.; Lim, J-S.; Lee, Y-W. (2005). Supercritical water oxidation of wastewater from LCD manufacturing process: kinetic and formation of chromium oxide nanoparticles. *J. of Supercritical Fluids*, 34, 51-61.
- [24] Shin, Y. H.; Shin, N. C.; Veriansyah, B.; Kim, J.; Lee, Y. W. (2009). Supercritical water oxidation of wastewater from acrylonitrile manufacturing plant. *Journal of Hazardous Materials*, 163 (2-3), 1142-1147.
- [25] Cui, B.; Cui, F.; Jing, G.; Xu, S.; Huo, W.; Liu, S. (2009). Oxidation of oily sludge in supercritical water. *Journal of Hazardous Materials*, 165 (1-3), 511-517.
- [26] Griffith J. W. and Raymond D. H. (2002). The first commercial supercritical water oxidation sludge processing plant. *Waste Management*, 22, 453-459.
- [27] Thomason, T. B.; Hong, G. T.; Swallow, K. C.; Killilea, W. R. (1990). The modular supercritical water oxidation process. *Innovate Hazardous Waste Treatment Technology Series, Vol. 1: Thermal Processes*; Freeman, H.M., ed.; Technomic Publishing Co.; Lancaster, PA, 31-42.
- [28] Modell, M.; Kuharich, Evan F.; Rooney, Michael R. (1991). Supercritical water oxidation process and apparatus of organics with inorganics. *PCT Int. Appl. WO 93 00, 304 (Cl. CO2F11/08)*, 07 Jan 1993, *US Appl. 722,979*, 28 Jun.
- [29] Marrone, P. A.; Hong, G. T. (2009). Corrosion control methods in supercritical water oxidation and gasification processes. *Journal of Supercritical Fluids*, 51(2), 83-103.

- [30] Cocero, M. J.; Alonso, E.; Sanz, M. T.; Fernández-Polanco, F. (2002). Supercritical water oxidation process under energetically self-sufficient operation. *Journal of Supercritical Fluids*, 24, 37 – 46.
- [31] Bermejo, M. D.; Cocero, M. J. (2006). Supercritical water oxidation: a technical review. *AIChE Journal*, 52(11), 3933-3951.
- [32] Kodra, D.; Balakotaiah, V. (1992). Modeling of supercritical oxidation of aqueous wastes in a deep-well reactor. *AIChE Journal*, 38 (7), 988-1001.
- [33] Eckert, C. A.; Leman, G. W.; Yang, H. H. (1990). Homogeneous catalysis for wet oxidation: design and economic feasibility of a mobile detoxification unit. *Hazard. Mat. Control*, 3, 20.
- [34] Savage, P.E. (1999). Organical chemical reactions in supercritical water. *Chemical reviews*, 99 (2), 603-621.
- [35] P. J. Crooker, K. S. Ahluwalia, and Z. Fan. Operating Results from Supercritical Water Oxidation Plants. *Ind. Eng. Chem. Res.* 2000, 39, 4865-4870.
- [36] Larry S. Cohen, Dan Jensen, Gary Leeb, David W. Ordway. Hydrothermal oxidation of Navy excess hazardous materials. *Waste Management* 18 (1998) 539-546
- [37] A. Gidner, L. Stenmark. Oxidation of de-inking sludge in Supercritical water. Presented at Workshop, Managing Pulp and Paper Process Residues, 30-31 May, 2002, Barcelona, Spain.
- [38] L. Stenmark, Aqua Citrox the Chematur engineering AB concept for SCWO. Workshop: supercritical water oxidation. Achievements and Challenges in commercial applications. Arlington (Virginia) USA 14- July (2001).
- [39] S. Baur, H. Schmidt, A. Kramer, J. Gerber. The destruction of industrial aqueous waste containing biocides in supercritical water—development of the SUWOX process for the technical application. *J. of Supercritical Fluids* 33 (2005) 149-157.
- [40] Angel Ma Ruiz de Apodoca Espinosa. "Derecho ambiental integrado: la regulación de los lodos de depuradoras y de sus destinos". Universidad de Navarra. 1ª Ed. 2001. Ed. Civitas. Madrid.
- [41] E. Gloyna. Supercritical water oxidation deep-well technology for toxic wastewaters and sludges. Separations Research Program Publication No. W-89-1.
- [42] D. Rincón. Planta de hidrólisis de residuos sólidos. Aplicación al tratamiento de fangos de depuradora. Universidad de Valladolid. Proyecto fin de carrera N° 180.
- [43] M. Svanstróm, M. Fróling, M. Modell, W.A. Peters, J. Tester. Environmental assessment of supercritical water oxidation of sewage sludge. *Resources, Conservation and Recycling* 41 (2004) 321-338.
- [44] J.W. Griffith, D.H. Raymond. The first commercial supercritical water oxidation sludge processing plant *Waste Management*, 22, 453-459 (2002)
- [45] B. Veriansyah, Tae-Joon Park, Jong-Sung Lim, Youn-Woo Lee. Supercritical water oxidation of wastewater from LCD manufacturing process: kinetic and formation of chromium oxide nanoparticles *J. of Supercritical Fluids* 34 (2005) 51-61.

- [46] R. Viswanathan, R. B. Gupta. Supercritical water oxidation of wastewater from LCD manufacturing process: kinetic and formation of chromium oxide nanoparticles. *J. of Supercritical Fluids* 27 (2003) 1874-193.
- [47] Lee, H. C.; Kim, J. H.; In, J. H.; Lee, C. H. (2005). NaFeEDTA decomposition and hematite nanoparticle formation in supercritical water oxidation. *Ind. Eng. Chem. Res.*, 44, 6615-6621.
- [48] Portela, J. R.; Nebot, E.; Martinez de la Ossa, E. (2001c). Kinetic comparison between Subcritical and Supercritical Water Oxidation of Phenol. *Chemical Engineering Journal*, 81(1-3), 287-299.
- [49] Aymonier, C.; Gratiot, A.; Mercadier, J.; Cansell, F. (2001). Global reaction heat of acetic acid oxidation in supercritical water. *Journal of Supercritical Fluids*, 21, 219 – 226.
- [50] Mateos, D.; Portela, J.R.; Mercadier J.; Marias F.; Marraud C.; Cansell F. (2005). New approach for kinetic parameters determination for hydrothermal oxidation reaction. *J. Supercritical Fluids*, 34, 63-70.
- [51] Benjamin, K. M.; Savage, P. E. (2005). Detailed chemical kinetic modeling of methylamine in supercritical water. *Ind. Eng. Chem. Res.*, 44(26), 9785-9793.
- [52] Modell M.; Kuharich E. F.; Rooney M. R (1993). Supercritical water oxidation process and apparatus for waste mixtures containing organics and inorganics. *PCT Int. Appl.* 9300304.
- [53] Cansell, F. (2002). Method for treating waste by hydrothermal oxidation. *International Patent WO 0220414*. 14-03-2002.
- [54] Vielcazals, S.; Mercadier, J.; Marias, F.; Mateos, D.; Bottreau, M.; Cansell, F.; Marraud, C. (2006). Modeling and simulation of hydrothermal oxidation of organic compounds. *AIChE Journal*, 52(2), 818-825.
- [55] Portela, J. R.; Mateos, D.; Mancini, F.; Marraud, C.; Cansell, F. (2007). Hydrothermal oxidation with multi-injection of oxygen: simulation and experimental data, *J. of Supercritical Fluids*, 40, 258-262.
- [56] Chkoundali, S.; Alaya, S.; Launay, J. C.; Gabsi, S.; Cansell, F. (2008). Hydrothermal oxidation of olive oil mill wastewater with multi-injection of oxygen simulation and experimental data. *Environmental Engineering Science*, 25(2), 173-180.
- [57] Li, L.; Chen, P.; Gloyna, E.F. (1993a). Kinetic model for wet oxidation of organic compounds in subcritical and supercritical water. *Supercrit. Fluid Eng. Sci.*, 24, 306.
- [58] Casal, V.; Schmidt, H. (1998). SUWOX-a facility for the destruction of chlorinated hydrocarbons. *Journal of Supercritical Fluids*, 13(1-3), 269-276.
- [59] Mueggenburg H. H.; Rousar D. C.; Young M. F. (1995). Supercritical water oxidation reactor with wall conduits for boundary flow control. *US Patent 5387398*. 1995-02-07.
- [60] Fauvel, E.; Jousot-Dubien, C.; Guichardon, P.; Charbit, G.; Sarrade, S. (2004). A double-wall reactor for hydrothermal oxidation with supercritical water across the inner porous tube. *J. of Supercritical Fluids*, 28, 47-56.
- [61] Barner, H. E.; Huang C. Y.; Killilea W. R.; Hong G. T. (1992b). Supercritical water oxidation with overhead effluent quenching. *PCT Int. Appl.* 9221622.

-
- [62] Cocero Alonso, M. J.; González Calvo, R.; Fernández-Polanco, F.; Soria García, J.L. (1997). Supercritical oxidation system using a cooled-wall shell. Spain Patent ES 2108627. 16-12-1997.
- [63] Cocero, M.; Martínez, J.L. (2004). Cool wall reactor for supercritical oxidation. Modelling and operation results. *J. of Supercritical Fluids*, 31, 41-55.
- [64] Bermejo, M. D.; Cantero, F.; Cocero, M. J. (2008). Supercritical water oxidation of feeds with high ammonia concentrations. *Chemical Engineering Journal*, 137(3), 542-549.
- [65] Jousset Dubien C., Didier G. and Turc H. A. (2000). Procédé et dispositif pour l'oxydation en eau supercritique de matières. Brevet Français FR 2814967. 10-11-2000.
- [66] Calzavara, Y.; Jousset-Dubien, C.; Turc, H.-A.; Fauvel, E.; Sarrade, S. (2004). A new reactor concept for hydrothermal oxidation. *J. of Supercritical Fluids*, 31, 195-206.
- [67] Oe T., Suzuki A.; Takahashi O.; Yasuo N. (1997). Apparatus and method for supercritical water oxidation of organic wastes. *Jpn. Kokai Tokkyo Koho* 09314155.
- [68] Weber, M.; Trepp, C. (1996). Required Fuel Contents for Sewage Disposal by Means of Supercritical Wet Oxidation (SCWO) in a Pilot Plant Containing a Wall Cooled Hydrothermal Burner (WCHB). *High Pressure Chemical Engineering.*, 565-574.
- [69] Wellig, B.; Weber, M.; Lieball, K.; Prikopsky, K.; Rudolf von Rohr, Ph. (2009). Hydrothermal methanol diffusion flame as internal heat source in a SCWO reactor. *Journal of Supercritical Fluids*, 49(1), 59-70.
- [70] Sierra-Pallares, J.; Parra-Santos, M. T.; Garcia-Serna, J.; Castro, F.; Cocero, M. J. (2009). Numerical modelling of hydrothermal flames: Micromixing effects over turbulent reaction rates. *Journal of Supercritical Fluids*, 50(2), 146-154.
- [71] Augustine, C.; Tester, J. W. (2009). Hydrothermal flames: From phenomenological experimental demonstrations to quantitative understanding. *Journal of Supercritical Fluids*, 47(3), 415-430.
- [72] Wellig, B.; Lieball, K.; Rudolf von Rohr, Ph. (2005). Operating characteristics of a transpiring-wall SCWO reactor with a hydrothermal flame as internal heat source. *Journal of Supercritical Fluids*, 34(1), 35-50.
- [73] Serikawa, R. M.; Usui, T.; Nishimura, T.; Sato, H.; Hamada, S.; Sekino, H. (2002). Hydrothermal flames in supercritical water oxidation: investigation in a pilot scale continuous reactor. *Fuel*, 81(9), 1147-1159.
- [74] www.Goodfellow.com. (060508). Propiedades materiales.
- [75] B. A. Baker and G. D. Smith. B. A. Pint and L. R. Walk. High-Temperature Oxidation Behavior of a New Ni-Cr-Mo-Si Alloy. *Special Metals Corporations and Pubs.*2004.
- [76] www.specialmetals.com. Propiedades inconel alloy 600, 625 y 718.
- [77] S. Mannan, E. Hibner, B. Puckett. Physical metallurgy of alloys 718, 725, 725hs, 925 for service in aggressive corrosive environments. *Special Metals Corporations and Pubs.*2004.
- [78] A. Baker, G. D. Smith, L. E. Shoemaker. Performance of Commercial Alloys in Simulated Waste Incineration Environments. *Special Metals Corporation and pubs.* 2004.

- [79] S. Mannan, S. Patel, J. de Barbadillo. thermal stability of inconel alloys 718, 706, 909, and waspaloy at 593°C and 704°C. Special Metals Corporation and Pubs. 2004.
- [80] P.Kritzer, E.Dinjus. An assessment of supercritical water oxidation (SCWO) Existing problems, possible solutions and new reactor concepts Chem. Eng. J.1 83 (2001) 207-214.
- [81] Ph. Botella, F. Cansell, Th. Jaszay, J.P. Frayret, M.H. Delville, Experimental set-up for electrochemical measurements in hydrothermal sub- and supercritical oxidation: polarization curves, determination of corrosion rates and evaluation of the degradability of reactors during hydrothermal treatments of aqueous wastes. J. of Supercrit. Fluids 26 (2003) 157-167.
- [82] P. Kritzer. Corrosion in high-temperature and supercritical water and aqueous solutions: a review. J. of Supercrit. Fluids 29 (2004) 1-29.
- [83] H. Schmieder, J. Abeln. Supercritical water oxidation: State of the art. Review. Chem. Eng. Technol. 22 (1999) 11. 903-908.
- [84] J.B. Johnston, R.E. Hannah, V.L. Cunningham, B.P. Daggy, F. Sturn, R.M. Kelly Destruction of pharmaceutical and biopharmaceutical wastes by the MODAR Supercritical Water Oxidation Process.; Bio. Technology 6, 1423 (1988).
- [85] F. Mathews, E. F. Gloyna. Corrosion behaviour of three high-grade alloys in supercritical water oxidation environments. Report CRWR 234, Center of research in water resources. Bureau of Engineering Research. Univeristy of Austin. Texas.(1992).
- [86] R.W. Shaw, N. Dahmen Destruction of toxic organic materials using supercritical water in Supercritical Fluids Fundamentals and Applications E. Kiran Ed., 425, NATO ASI, Blackie Academic (2000).
- [87] J.W. Griffith, D.H. Raymond The first commercial supercritical water oxidation sludge processing plant Waste Management, 22, 453-459 (2002)
- [88] P.A. Marrone, S.D. Cantwell, D.W. Dalton. SCWO System Designs for Waste Treatment: Application to Chemical Weapons Destruction Ind. Eng. Chem. Res. 2005, 44, 9030-9039.
- [89] Cocero M. J. Alonso E, Torio R, Vallelado D and Fdz-Polanco F, Supercritical water oxidation in a pilot plant of nitrogenous Compounds: 2-propanol mixtures in the temperature range 500-750 °c. Ind. Eng. Chem. Res. 2000, 39, 3707-3716.
- [90] M.J. Cocero, E. Alonso, R. Torio, D. Vallelado, T. Sanz, F. Fdz-Polanco. Supercritical water oxidation (scwo) for PolyethyleneTerephthalate (PET) industry Ind. Eng. Chem. Res. 2000, 39, 4652-4657.
- [91] <http://www.chematur.se> (1-Mayo-2006).
- [92] L. Stenmark, Aqua Citrox the Chematur engineering AB concept for SCWO. Workshop
- [93] Dutournie, P. Aymonier, C. Cansell, F. Mercadier, J. Experiments and simulations of time-dependant phenomena in a hydrothermal oxidation tubular reactor. Industrial & Engineering Chemistry Research (2003).

-
- [94] Dutournié, P. Mercadier, J. Supercritical waste hydrothermal treatment modelisation of non-stationary phenomena in a reactor. *The Journal of Supercritical Fluids* (2004).
- [95] Dutournié, P. Mercadier, J. Unsteady behaviour of hydrothermal oxidation reactors: theoretical and numerical studies near the critical point. *The Journal of Supercritical Fluids*. (2005).
- [96] Sánchez-Oneto., J. Mancini., F. Portela, J., R. Nebot, E. Cansell, F., Martínez de la Ossa, E. J., Kinetic model for oxygen concentration dependence in the supercritical water oxidation of an industrial wastewater. *Chemical Engineering Journal* (2008).
- [97] Cheng X., Yang Y.H., Huang S.F., A simplified method for heat transfer predictions of supercritical fluids in circular tubes, *Annals of Nuclear Energy*. (2009.)
- [98] Mokry S., Piro I., Farah A., Development of supercritical water heat-transfer correlation for vertical bare tubes. *Nuclear Engineering and Design*. (2011).
- [99] Gregory Nellis, Sanford Klein. *Heat transfer*. ISBN 978-0-521-88107-4. (2009).