



DAFTAR PUSTAKA

- Aradóttir, E.S., Sonnenthal, E., Björnsson, G., Jónsson, H., 2014. Multiphase wellbore flow and heat transfer in gas-rich geothermal systems. *Geothermics*, 50, 76–89.
- Arancibia, M., Björnsson, G., 2020. Modeling the effects of non-condensable gases in geothermal wells. *Geothermics*, 88, 101879. doi:10.1016/j.geothermics.2020.101879.
- ASME. (2009). ASME V&V 20-2009: Standard for Verification and Validation in Computational Fluid Dynamics and Heat Transfer. American Society of Mechanical Engineers.
- Barelli, A., Corsi, R., Pizzi, G., Cappetti, G., 1982. A two-phase flow model for geothermal wells in the presence of non-condensable gases. *Geothermics*, 11(3), 175–190.
- Beggs, D.H., Brill, J.P., 1973. A study of two-phase flow in inclined pipes. *Journal of Petroleum Technology*, 25(5), 607–617. doi:10.2118/4006-PA.
- Björnsson, G., 1978. Two-phase flow in geothermal wells. In: Proceedings of the 4th Workshop on Geothermal Reservoir Engineering. Stanford University, Stanford, pp. 307–314.
- Bobok, Elemer, Toth, Aniko, 2017. Flow and Heat Transfer in Geothermal Systems. Cambridge, Elsevier Inc.
- Brown, K.L., 2010. Mineral scaling in geothermal fields. In: Geothermal Power Plants: Principles, Applications, Case Studies and Environmental Impact (3rd ed.). Burlington: Elsevier, pp. 481–514.
- Celik, I.B., Gia, U., Roache, J.P., Freitas, J.C., Coleman, H., Raad, E.P. .2008. Procedure for Estimation and Reporting of Uncertainty Due to Discretization in CFD Applications. *ASME. J. Fluids Eng.*; 130(7): 078001. <https://doi.org/10.1115/1.2960953>.
- Cengel, Y. A., & Boles, M. A., 2015. Thermodynamics an engineering approach 8th Edition, New York, McGraw-Hill Education.
- Chapra, S.C., Canale, R.P., 2010. Numerical Methods for Engineers (6th ed.). New York: McGraw-Hill.
- Chisholm, D., 1983. Two-Phase Flow in Pipelines and Heat Exchangers. London: Longman.
- DiPippo, Ronald., 2008. Geothermal Power Plants: Principles, Applications, Case Studies and Environmental Impact. Burlington, Elsevier Ltd.
- DiPippo, Ronald., 2016. Geothermal Power Generation: Development and Innovation. Kidlington, Elsevier Ltd.
- Duan, Z., Sun, R., 2003. An improved model calculating CO₂ solubility in pure water and aqueous NaCl solutions from 273 to 533 K and from 0 to 2000 bar. *Chemical Geology*, 193(3–4), 257–271. doi:10.1016/S0009-2541(02)00263-2.
- Energy Outlook Indonesia, 2023. Indonesia Energy Outlook 2023. Jakarta: Dewan Energi Nasional.
- Ferziger, J.H., Perić, M., 2002. Computational Methods for Fluid Dynamics (3rd ed.). Berlin: Springer.
- Fournier, R.O., 1985. The behavior of silica in hydrothermal solutions. In: Berger,



- Fujii, Y. 1988. CaCO₃ scale problems in the Nigorikawa geothermal area, Hokkaido. Japan Geothermal Association, 25(4), 54–65. (In Japanese).
- García-Gutiérrez, A., Espinosa-Paredes, G. & Barragán, R.M., 2002. Effect of incondensable gases on the flow of water and steam in geothermal wells. *Revista Geofísica Internacional*, 41(4), 381–394.
- Ghiaasiaan, S. M., 2017. Two-Phase Flow, Boiling, and Condensation in Conventional and Miniature System. Cambridge, Cambridge University Press.
- Godbole, P. V., Tang, Clement C. & Ghajar, Afshin J., 2011. Comparison of void fraction correlations for different flow patterns in upward vertical two-phase flow. *Heat Transfer Engineering*, 32(10), 834–847.
- Govier, F. W., and Aziz, K., 1972. The Flow of Complex Mixtures in Pipes, Robert E. Krieger, Malabar, FL.
- Grant, M.A., Bixley, P.F., 2011. Geothermal Reservoir Engineering (2nd ed.). Amsterdam: Elsevier/Academic Press.
- Gupta, H., Roy, S., 2007. Geothermal Energy: An Alternative Resource for the 21st Century. Amsterdam: Elsevier.
- Hanratty, Thomas J. 2013, Physics of Gas-Liquid Flows, New York, Cambridge University Press.
- Hasan, A.R., Kabir, C.S., 2002. Fluid Flow and Heat Transfer in Wellbores. Richardson, TX: Society of Petroleum Engineers.
- Hasan, A.R., Kabir, C.S., 1994. Aspects of wellbore heat transfer during two-phase flow. *SPE Production & Facilities*, 9(3), 211–216.
- Hasan, A.R., Kabir, C.S., Wang, X., 2009. A robust steady-state model for flowing-fluid temperature in complex wells. *SPE Production & Operations*, 24(2), 269–276.
- Hewitt. G.F. & Hall-Taylor, N.S. 1970 Annular Two-Phase Flow. Oxford: Pergamon Press.
- Ishii, M., Hibiki, T., 2011. Thermo-Fluid Dynamics of Two-Phase Flow (2nd ed.). New York: Springer.
- Khalifa, H.E., 1978. Effect of non-condensable gases on the performance of geothermal steam power plants. *Solar Energy*, 21(1), 57–63.
- Khasani, D., Deendarlianto, Itoi, R., 2021. Numerical study of the effects of CO₂ gas in geothermal water on the fluid-flow characteristics in production wells. *Engineering Applications of Computational Fluid Mechanics*, 15(1), 111–129. doi:10.1080/19942060.2020.1862709.
- Lei, H., 2023. Modeling of two-phase flow of high-temperature geothermal production wells in the Yangbajing geothermal field, Tibet. *Frontiers in Earth Science*, 11, 1019328. doi:10.3389/feart.2023.1019328.
- Michaelides, E.E., 1982. Effect of non-condensable gases on the thermodynamic performance of geothermal power plants. *Geothermal Resources Council Transactions*, 6, 461–464.
- Nicholson, Keith. 1993, Geothermal Fluids Chemistry and Exploration Techniques, Berlin, Springer-Verlag.
- Omebere-lyari, N.K. & Azzopardi, B.J. 2000 Links across flow-patterns in gas-liquid flow in vertical pipes. Paper presented at the 2nd Japanese-European Two-Phase Group Meeting, Tsukuba, 25–29 September.



- Orkiszewski, J., 1967. Predicting two-phase pressure drops in vertical pipe. *Journal of Petroleum Technology*, 19(6), 829–838. doi:10.2118/1546-PA.
- O’Sullivan, M.J., Pruess, K., Lippmann, M.J., 2001. State of the art of geothermal reservoir simulation. *Geothermics*, 30(4), 395–429. doi:10.1016/S0375-6505(00)00053-1.
- Pruess, K., 2004. The TOUGH2 family of multiphase fluid and heat transport simulators for geothermal reservoir applications. Lawrence Berkeley National Laboratory Report LBNL-43134, Berkeley, CA.
- Ramey, H.J., 1962. Wellbore heat transmission. *Journal of Petroleum Technology*, 14(4), 427–435. doi:10.2118/96-PA.
- Roache, P. J. 1994. Perspective: A Method for Uniform Reporting of Grid Refinement Studies. *ASME. J. Fluids Eng.*; 116(3): 405–413. <https://doi.org/10.1115/1.2910291>.
- Roache, P. J. 1998. Verification and Validation in Computational Science and Engineering. Albuquerque, NM: Hermosa Publishers.
- Rye, R.O. & Bethke, P.M., 1985. , Geology and Geochemistry of Epithermal Systems. *Reviews in Economic Geology*, vol. 2. Littleton, CO: Society of Economic Geologists, pp. 45–61.
- Satman, A., 2002. The role of non-condensable gases in geothermal well performance. *Geothermics*, 31(6), 707–734.
- Spycher, N., Pruess, K., 2010. A phase-partitioning model for CO₂–H₂O mixtures at elevated temperatures and pressures. *Transport in Porous Media*, 82(1), 173–196. doi:10.1007/s11242-009-9396-1.
- Stefánsson, A., Driesner, T. & Oelkers, E.H. 2013, Thermodynamic of Geothermal Fluids. Virginia. The Mineralogical Society of America.
- Stoer, J., & Bulirsch, R. 2002. Introduction to Numerical Analysis (3rd ed.). New York, NY: Springer.
- Thome, J. R. 2006. Engineering Data Book III, Wolverine Tube Inc.
- Tonkin, M., O’Sullivan, M.J., 2021. A review of mathematical models for geothermal wellbore simulation. *Geothermics*, 97, 102255. doi:10.1016/j.geothermics.2021.102255.
- Vijayan, P.K., Nayak, A.K., Saha, D., 2000. A generalized correlation for steady-state flow in single-phase natural circulation loops. *Nuclear Engineering and Design*, 194(2–3), 305–318.
- Yadigaroglu, G., Hewitt, G.F., 2018. Introduction to Multiphase Flow: Basic Concepts, Applications and Modelling. Cham: Springer.