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Relationship of parameters of the critical point of phase gas-liquid transition with boyle temperature

© Ihtiyor H. Umirzakov
Laboratory for Simulation. Institute of Thermal Physics SB RAS. Lavrentyev Pr., 1. Novosibirsk, 630090. Russia. Phone: +7 (383) 354-20-17. E-mail: tepliza@academ.org

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Abstract

It is shown that for 21 real substances the relation of Boyle temperature to the product of critical temperature and critical compressibility factor with high precision is equal to number 9, predicted by the state equation of van der Waals. We proposed the ratio for finding the critical volume through the relation of Boyle temperature to critical pressure. We also suggest a formula for determining the critical volume through the critical temperature and parameters of straight line of single compressibility.