

Enthalpy of Gas Hydrate Formation for Mixed Gas Hydrates

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Formation enthalpy of gas hydrates has been calculated using Clausius-Clapeyron equation from temperature pressure relation for incipient hydrate formation in mono variant single guest system. For mixed guest systems, however, cavity occupation of different guest molecules introduces additional degree of freedom and use of Clausius-Clapeyron introduces uncertainties. In the present paper a method was developed for the calculation of formation enthalpy of mixed guest hydrates using method and information for phase equilibrium calculation with van der Waals and Platteeuw model for gas hydrate phase and equation of state model for fluid phase. Calculated values were found in acceptable agreements with data.