

عنوان مقاله:

Evaluation of Empirical Correlations for Predicting Gas Hydrate Formation Temperature

محل انتشار:

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خلاصه مقاله:

One of the important, practical and simple methods for hydrate formation condition is empirical equations, and so far many empirical equations have been presented to predict the temperature and pressure of hydrate formation. In this study, the methods and empirical correlations have been reviewed and their predictive capabilities have been evaluated with the use of more than 2000 experimental data collected from literature. These data have been separated in three groups: (1) simple natural gas components included methane, ethane, propane, isobutane, carbon dioxide, nitrogen, and hydrogen sulfide (2) binary gas mixtures and (3) gas mixture similar to natural gas. In this paper, after expressing the restrictions of some empirical correlations have been proposed by scientists before and proposed empirical correlation in the present study, the results of evaluating have been presented in several tables and curves. The proposed empirical correlation in the present study has shown reliable performance for both simple natural gas components and mixtures. Despite the existence of three adjustable parameters, the accuracy of this equation shows the ranking 1 to 3 compared to the rest of the equations.

کلمات کلیدی:

Empirical Correlations, Gas Hydrate Formation Condition, Natural Gas Mixtures, Hydrate Formation Predicting, Hydrate Formation Temperature

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