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عنوان مقاله:

A Comprehensive Study on the CCE Test of a Reservoir Fluid, Compositional Approach

محل انتشار:

دوازدهمین کنگره ملی مهندسی شیمی ایران (سال: 1387)

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خلاصه مقاله:

This paper presents the results of a comprehensive study on the CCE Test of a reservoir fluid. A computer program was developed to simulate CCE Test in a compositional fashion based on the thermodynamics of phase equilibria. Four EOSs (PR, SRK, SW and PT) were used. Splitting-lumping of heavy fractions were performed using Whitson, equal mass, equal mole and equal zilnMi methods. Plus fraction characterization was done using Lee-Kesler, Riazi-Daubert, Perturbation Expansion and Robinson- Peng methods. Volume shift concept was taken into account. The experimental values of bubble point pressure and relative volumes were used to tune the parameters of EOS such that the predicted properties match the experimental values (Regression). The results of simulated CCE test were compared to experimental values. Our study demonstrated that; the use of compositional approach in simulating CCE Test results in good agreements with experimental values. Regression and volume shift concept improved the agreement with experimental results. SW and PT EOSs showed better agreement with experimental results than PR and SRK EOSs. Even though, PR and SRK are suggested by authors for compositional reservoir simulation, because .of their simplicity and acceptable agreement with experimental results, especially after regression

كلمات كليدى:

CCE Test, Equation of state, Lumping, Phase equilibria, Regression, Splitting, Volume shift

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