

عنوان مقاله:

Prediction of Natural Gas Hydrate Formation in presence of Aqueous Electrolyte Solutions by Updating the Parameters of Existing Thermodynamic Model

محل انتشار:

دومین کنفرانس دوسالانه بین المللی نفت، گاز و پتروشیمی (سال: 1397)

تعداد صفحات اصل مقاله: 7

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خلاصه مقاله:

Knowing the hydrate phase equilibria in brines is critically important to assess the risk of hydrate formation, especially for conditions involving high salinity and very high pressure, which are becoming more prevalent in oil/gas exploration and production. Inorganic salts are thermodynamic hydrate inhibitors and are commonly present in produced water from oil/gas production. In the present work, after updating and re-optimization the parameters of the thermodynamic model for calculating the water activity coefficient in the presence of various electrolytes (NaCl, KCl, CaCl₂ and MgCl₂), the average absolute deviation of the model, is about 0.40 K for pressures ranging from 0.2 to 15 MPa. Compared to other literature models, it shows the high accuracy of the model

کلمات کلیدی:

Hydrate formation, Inhibitors, Electrolyte, Thermodynamic model

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