

The effect of SO₂ and NO on CO₂ hydrate

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The captured CO₂ for CO₂ sequestration includes traces of impurities such as SO_x and NO_x. However, Only Beeskow-strauch reported equilibrium data for CO₂-water-SO₂ mixture and no literature data are known to present authors for CO₂-water-NO mixture. In this study, the effect of SO₂ and NO on CO₂ hydrate formation in the range of 1 to 10% impurities of the mixed gas determined in aqueous-hydrate-vapor equilibria region. The isobaric hydrate dissociation temperatures of formed hydrate were measured at the constant pressure from 1.5 to 3.5 MPa. Duhem's theorem was thermodynamically satisfied by measuring temperature, pressure and overall composition of all components. Present data were compared with literature data.