

Measurement of Bubble Points of Carbon Dioxide and dimethyl carbonate (DMC) formamide Mixtures Using the Variable-Volume View Cell Apparatus

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The bubble point pressures of carbon dioxide (CO₂) and dimethyl carbonate (DMC) mixtures were measured by using a high-pressure experimental apparatus equipped with a variable-volume view cell. The experimental bubble point pressure data were correlated with the Peng-Robinson equation of state (PR-EOS) to estimate the corresponding dew point compositions at equilibrium with the bubble point compositions. The experimentally measured bubble point pressures gave good agreement with those calculated by the PR-EOS. The variable-volume view cell equipment was verified to be an easy and quick way to measure the bubble point pressures of high-pressure compressible fluid mixture.