

The Use of Equations of State for Simulation of Fluid Properties of Equations of State in Fluid Property Simulation

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Preparation of equation of state based fluid models is key in the evaluation of development prospects in the petroleum industry. In an industry based on volume, the key fluid properties required are the density and viscosity of the fluid phases flowing in process facilities, pipelines, and reservoirs. The density and molar volume is crucial for converting mole and mass based simulation to the volumes required for analyzing petroleum production. The density is also a key property in viscosity and interfacial tension as well. This talk will present and discuss recent success in modelling the density and viscosity of reservoir fluids through the use of Chain of Rotators, and SAFT EOS for density and Friction Theory for fluid viscosity over wide ranges of temperature and pressure.