

PVT-Properties of Hydrocarbon- Water System

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Study of temperature pressure dependences of mixtures consisting of hydrocarbons and water is important for practical use, as natural hydrocarbon mixtures as a rule are in contact with water. The results of such examination are important and for the theory, as they give information on interaction between polar and nonpolar molecules. Temperature dependence of pressure is determined on isochores, including temperatures of phase transition a liquid-liquid and liquid-vapour. Original construction of high-temperature adiabatic calorimeter allows to use it also as a piezometer of constant volume and to measure in the same experiment isochoric heat capacity and PVT-properties n-heptane containing 0.147 mole fractions of water mixture in large region of temperatures. The temperature dependence of pressure is determined on isochors, including a liquid-liquid and liquid-vapour phase transitions.

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