# NATURE OF THE KINEMATIC SHEAR VISCOSITY OF BENZENE AND ITS DERIVATIVES

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S u m m a r y

The paper is devoted to the detailed analysis of the kinematic shear viscosity $\nu$ of benzene as a function of the normalized temperature $t$ and specific volume $\tilde{v}$ ($t = T/T_c$, $\tilde{v} = v/v_c$, where $T_c$ and $v_c$ are the critical temperature and specific volume). Using experimental values of $\nu$, $t$, and $\tilde{v}$ for benzene and argon on their coexistence curves, it is shown that the kinematic shear viscosities of these liquids are fully similar in the manner of the principle of corresponding states. It is surprising since their equations of state are only approximately similar. It is rigorously proved that the kinematic shear viscosity of benzene has no activation character. The explicit formula for $\nu$ of argon and benzene is proposed. It is shown that the behavior of $\nu$ is mainly determined by the specific volume. Such a peculiarity is inherent to Batchinski's formula, although the character of such an influence is quite different. The manifestation of the hard-core effects is discussed.