Detonation waves parameters for FEFO/nitrobenzene solution
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The dependence of detonation parameters for (bis-(2-fluoro-2,2-dinitroethyl)formal)/nitrobenzene solution (FEFO/NB) from NB concentration was defined. Velocity profiles of the boundary between HE and water window were recorded by laser interferometer VISAR. It was found that particle velocity in a pure FEFO was strongly oscillating with the oscillation amplitude $\sim 50$ m/s. It means that detonation front is unstable and irregularity size is about $10 \text{ mkm}$. The average velocity profile corresponds to ZND model. The reaction time is equal to $\sim 400\text{ns}$, C-J pressure and particle velocity are $24 \text{ GPa}$ and $2.0 \text{ km/s}$ respectively. For FEFO/NB solution it was found that at low NB concentrations ($10-20\%$) oscillations disappeared and detonation front was stable. When the NB concentration was increased up to $30\%$ high-frequency oscillations appeared again. The measurements of reaction zone structure up to critical concentration were conducted, it was about $45\%$. At average particle velocity profiles Von Neumann spike was distinctly registered. It was shown that in a pure FEFO and in solutions with NB concentration exceeding $30\%$ detonation front was unstable.

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