## LIQUID VELOCITY PULSATIONS IN TURBULENT MIXING ZONES UNDER THE RAYLEIGH-TAYLOR AND THE KELVIN-HELMHOLTZ INSTABILITIES

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The results of two experimental series are presented on the study of liquid velocity pulsations in a turbulent mixing zone under the Rayleigh-Taylor and the Kelvin-Helmholtz instabilities propagating at the gas-liquid interfaces. The first experimental series was conducted at a light-gas gun; the second series was conducted using the air shock tube where the shock wave was sliding on the liquid boundary. The value of interface acceleration under the Rayleigh-Taylor instability was varied in the range of  $10^3g_0-10^4g_0$ , the Mach number of the air shock wave under the Kelvin-Helmholtz instability was varied from 1.2 to 1.6. The flow was recorded by particle image velocimetry (PIV-method).

It was obtained that with increasing mass velocity of the flow in a turbulent mixing zone, the absolute value of the mean velocity pulsation increases in time.