

RT MIXING OF A THIN LIQUID LAYER ON THE RIGID WALL MOVING WITH DECELERATION

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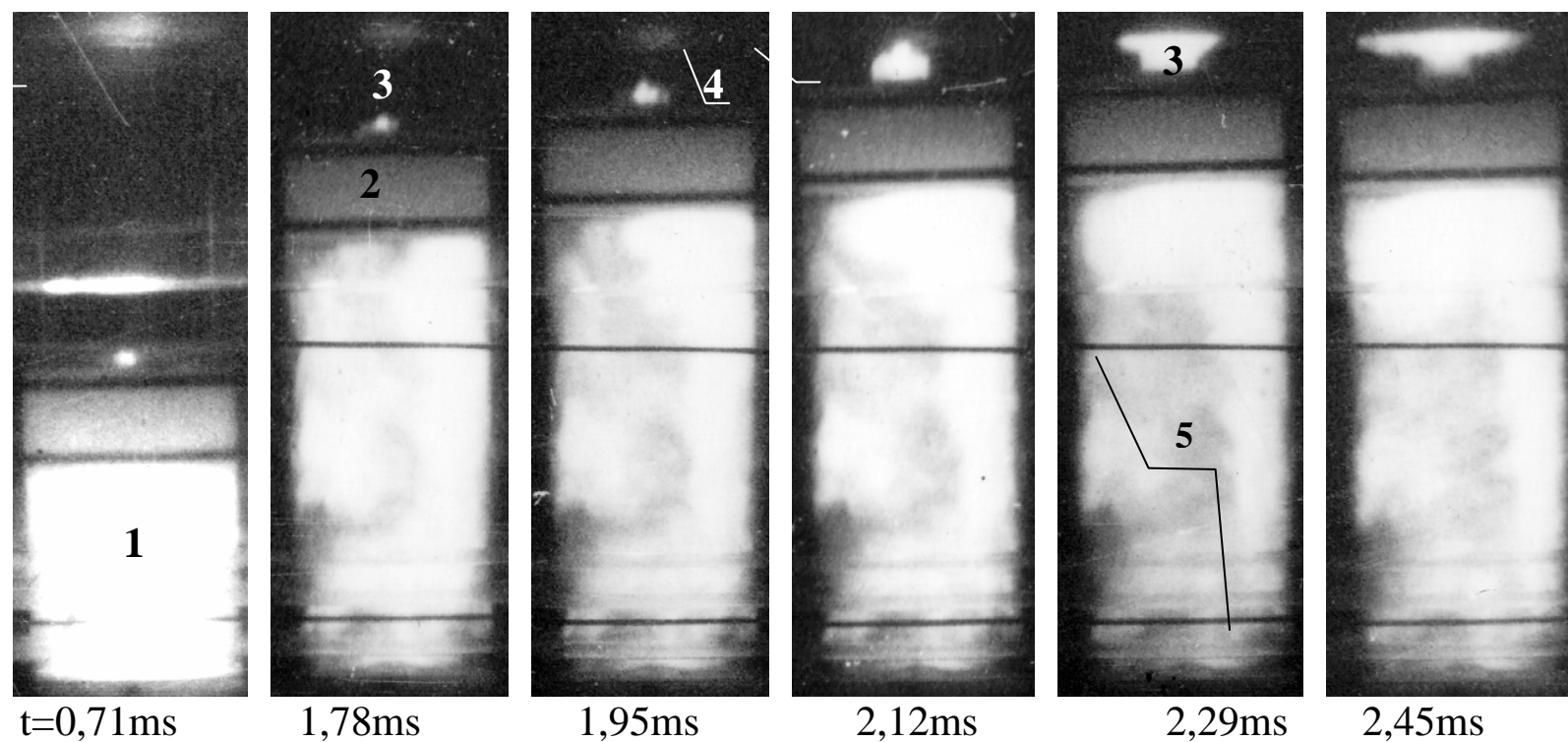


Fig.1. Photochronograms of turbulent mixing of a thin water layer at the edge of decelerated piston due to development of RT instability. Designations: 1-selfluminiscenting products of a detonation of a mix of acetylene with oxygen; 2-piston; 3-layer of water (after the beginning of deceleration of the piston - a zone of turbulent mixing of water with air); 4-end face of the accelerating channel; 5-marker lines. Time is counted from the moment of initiation of a detonation of a mix.

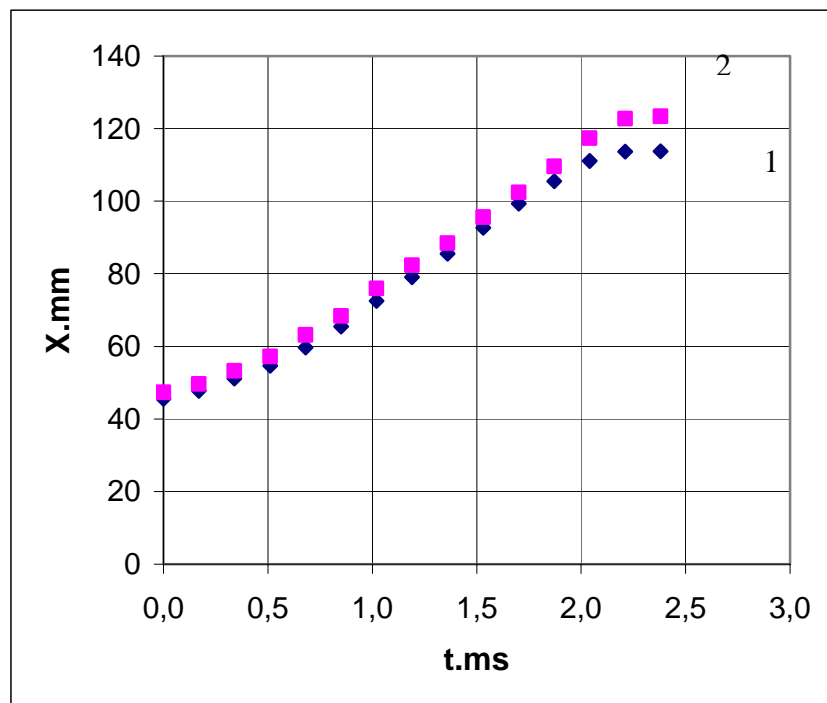


Fig.2 – The $X-t$ diagram of the top edge of the piston (1) and the top edge of turbulent mixing zone (2).

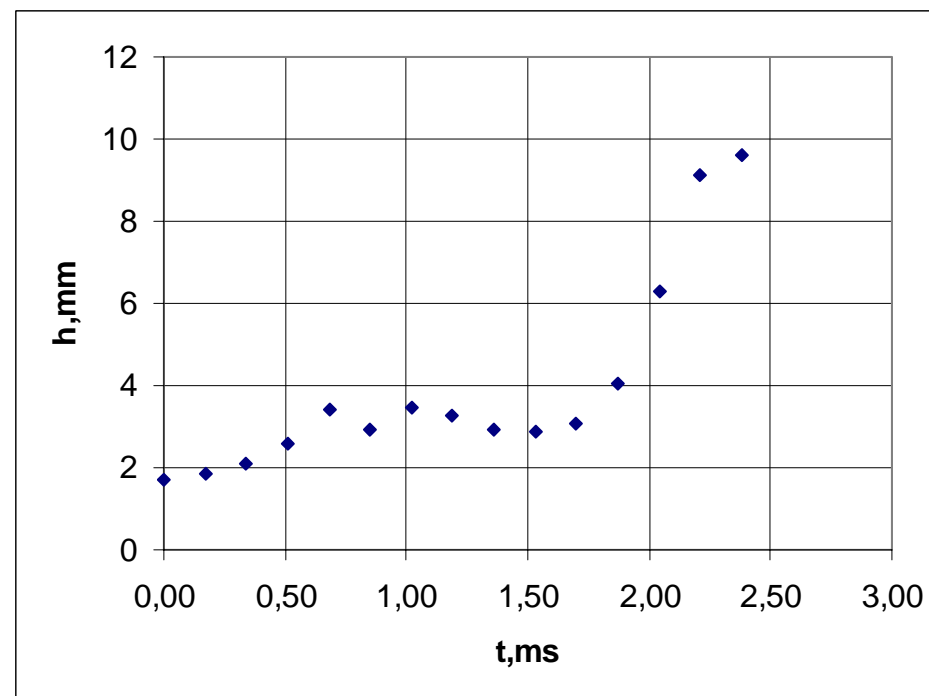


Fig.3 Dependence on time of thickness of a turbulent mixing zone. At a stage of the accelerated movement of the piston ($t \leq 1.4 \text{ ms}$) seen thickness of a layer of water is defined by fluctuations of its surface thereof it appears in some times more than average thickness of a layer ($\sim 0.4 \text{ mm}$).