

## Research of turbulent mixing in three-layer gas systems

*N. V. Nevmerzhitsky, A. N. Razin, E. D. Senkovsky, E. A. Sotskov, A. A. Nikulin, O. L. Krivonos,  
A.A.Polovnikov, S.V. Frolov*

Russian Federal Nuclear Center  
All-Russia Research Institute  
of Experimental Physics

607190, Russia, Nizhni Novgorod reg., Sarov  
E-mail: root@gdd.vniief.ru

### **Abstract** **for the XII International Workshop on the Physics** **of Compressible Turbulent Mixing**

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Results are presented for experimental researches of turbulent mixing growth, which occurs at interfaces of three-layer gas systems during passage of a stationary shock wave with Mach number  $M \approx 1.3$ . Tests were performed using a shock tube. Geometries of the tests differed in shape and location of interfaces of the gases, namely, the interfaces were located perpendicularly, at angle to the shock wave direction, or they had bends. Turbulent mixing was investigated in the systems *air* –  $SF_6$  – *air*, *air* – *He* –  $SF_6$ , and *air* – *He* – *air*.

The flow structure was recorded by the schlieren method with laser illumination. New experimental data were obtained on character of turbulent mixing growth in two-dimensional flows. The data are helpful for understanding of physics of the process, verification of physical models and numerical techniques intended for calculation of turbulent mixing.