

Poster 1

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## About the opportunity of use of the color photo for visualization of the zone of turbulent mixing in experiments on the shock tube with the GEM-driver

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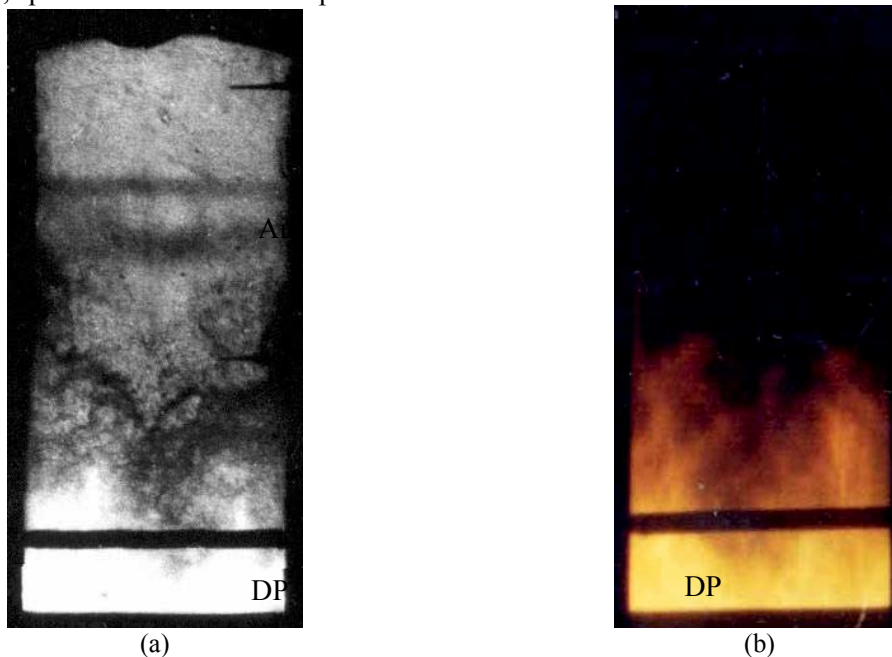
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A zone of turbulent mixing (TMZ) on the interface of two gases in experiments on shock tubes (see f.e. [1]) is invisible without visualization and photoregistration tools, so apply various shadow methods are used.

In experiments with the TMZ using gas explosive mixtures (GEM) [2] products of a detonation of a mix of acetylene with oxygen possess high temperature ( $\sim 4000^\circ$ ) and shining bright enough for registration of current on a color film (see figure). The outcome of the experiments in a shock tube with the GEM-driver illustrate opportunities of similar registration of TMZ on interface between products of detonation GEM and air.

Opportunities to study the structure of TMZ in similar experiments with the help of a color photo and, in particular, spatial distribution of temperatures in TMZ are discussed.



Zone of turbulent mixing on interface: a detonation products (DP) of mixture of acetylene with oxygen - air (Air) in experiments on the shock tube working under the method [2] a) Shadow black-and-white photo of a zone of mixing and b) a color photo of own luminescence of products of a detonation

### References

1. Andronov V.A. *et al.* . Sov.Phys.JETP, т.71, вып. 2(8), 1976. С. 806. (in Russian).
2. Meshkov E.E. One Approach to the Experimental Study of Hydrodynamic Instabilities: Creation of a Gas-Gas Interface Using the Dynamic Technique. The Proc of the 5th IWPCMT, Stony Brook, USA, 1995, p.237.