## Behavior modeling of porous materials in the elements of multilayer structures at transient load

## © T.A. Butina, V.M. Dubrovin

## Bauman Moscow State Technical University, Moscow, 105005, Russia

A model of the behavior of a porous material with heavy loading is suggested. The effect of the presence of porous materials in multilayer shells on the stress-strain state under the action of a mechanical pulse is considered.

## **Keywords:** dynamic stressing, strain-stress state, cellular materials, pressure shock front.

**Butina T.A.** (b. 1950) graduated from the Faculty of Management and Applied Mathematics of the Moscow Institute of Physics and Technology in 1974. Ph.D., Assoc. Professor of the Computational Mathematics and Mathematical Physics Department of Bauman Moscow State Technical University. A specialist in the field of strength and stability of deformable systems. e-mail: butina\_ta@mail.ru

**Dubrovin V.M.** (b. 1935) graduated from the Faculty of Mathematics and Mechanics Saratov State University in 1958. Ph.D., Assoc. Professor of the Computational Mathematics and Mathematical Physics and of the Higher Mathematics Departments of Bauman Moscow State Technical University. Specialist in the field of strength, stability of deformable systems. Research interests: dynamics of strength and stability of deformable systems; creep of structural materials. e-mail: vmdubrovin@mail.ru