The phase velocity of traveling waves in a cylindrical shell with finite and infinite stiffness transverse shear

© V.O. Kaledin[1], E.A. Sedova[1], Yu.V. Shpakova[2]

[1]Kemerovo State University Novokuznetsk Institute (branch), Kemerovo, 650043, Russia
[2]Bauman Moscow State Technical University, Moscow, 105005, Russia

An analytical solution to the problem of calculation of phase velocity of traveling waves on the surface of a cylindrical shell on one edge which has a perturbing force per unit length, and the second edge attached. The influence of the choice of the kinematic hypothesis, the results of calculation of phase velocities.

Kaledin V.O. (b. 1955) graduated from Kharkiv Aviation Institute in 1978. Dr. Sci. (Eng), Professor, Dean of the Faculty of Information Technology of Kemerovo State University Novokuznetsk Institute (branch). e-mail vkaled@nkfi.ru

Sedova E.A. (b. 1985) graduated from Kemerovo State University in 2007. Ph.D., Assoc. Professor of Kemerovo State University Novokuznetsk Institute (branch). e-mail: sedovaea@yandex.ru

Shpakova Yu.V. (b. 1982) graduated from Kemerovo State University in 2004. Assoc. Professor of the Computational Mathematics and Mathematical Physics Department of Bauman Moscow State Technical University. e-mail: shpakovayuliya@bmstu.ru