P. Kluska, W.J. Staszewski, M.J. Leamy, T. Uhl

Lamb Wave Propagation Modeling Using Cellular Automata

Дрезден, Германия, 2012 год

9 стр; формат: 23,5 x 16 см; библиографический список: 12 единиц

Theory of Lamb Wave propagation in plate-like structures have found many practical applications in Structural Health Monitoring. However for better understanding of complex physical phenomena associated with wave propagation and wave interaction with damage numerical simulations are as important as laboratory experiments. The paper shows the application of Cellular Automata technique for modeling of elastic wave propagation. After a brief introduction to Lamb waves, 2-D triangular Cellular Automata approach for wave propagation is presented. Numerical simulations are performed for undamaged and damaged aluminium plates. The results are compared with the Local Interaction Simulation Approach (LISA).

Ключевые слова:

Содержание