

7 Concluding remarks

A method for determination of natural frequencies of nano-beams is developed. The nano-beams under consideration have constant dimensions and are weakened by stable cracks.

It is shown that the cracks affect the frequencies of natural vibrations of nano-beams.

The influence of a crack on the vibration of nano-beam is less remarkable if the crack is located near a simply supported edge of the nano-beam. Calculations carried out showed that the

eigenfrequency monotonically decreases if the length of the nano-beam increases.

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