



Influence of cross-sectional configuration on Kármán vortex excitation

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Three cylindrical bodies with different cross-sectional configurations, i.e. a circular, semi-circular and triangular cylinder, are used as the test cylinders, in order to investigate the influence of movement of the separation point on the Kármán vortex excitation. The cylinders were supported elastically by plate springs. The synchronization of Kármán vortex shedding occurs on all three cylinders over almost equal ranges of oscillation amplitude and frequency given by the mechanical oscillator. However, the Kármán vortex excitation behavior differs drastically among the three cylinders in spite of the fact that the cylinders are supported elastically with virtually equal structure parameters.

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