

Interaction of Oscillating Flow with a Pair of Side-By-Side Square Cylinders

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The main purpose of this study is to investigate the interaction of vortices induced by two square cylinders in an oscillatory flow. Unsteady variation of vortices are obtained using the numerical calculation and the experimental approach. Flow fields are visualized using numerical and experimental results. The variation in vortices depends on the gap ratio, Keulegan-Carpenter number and Reynolds number. Several modes in flow fields are found due to variation of these parameters. Strong interaction between two vortex system induced by two square cylinders are observed in small gap ratios and high Keulegan-Carpenter numbers. The flow in the gap plays a very important role in the interaction.

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