

عنوان مقاله:

EXPERIMENTAL STUDY OF PIPE DIAMETER EFFECT TO THE VORTEX INDUCED VIBRATION OF TWO-DEGREE-OF-FREEDOM PIPE DUE TO WAVES

محل انتشار:

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نویسندگان:

S.M. Mousavi - Civil Eng. Department, Sahand University of Technology, Tabriz, Iran

A.R. M. Gharabaghi - Civil Eng. Department, Sahand University of Technology, Tabriz, Iran

M.H. Sedaaghi - Electrical Eng. Department, Sahand University of Technology, Tabriz, Iran

خلاصه مقاله:

When an object like a pipe is located in a flow or wave, the flow regime would be changed around it which leads to the increment of shear stress and turbulence intensity. As a result, in special conditions we will see flow separation and vortex shedding in lee-side of the pipe. These vortexes impose the periodic forces on the cylinder which may lead the pipe to vibrate. These vibrations are named Vortex Induced Vibrations (VIVs) [1]. VIV's studies are mostly around Cross-Flow (CF) pipe vibrations (one-degree-offreedom pipes) and somewhat both In-Line (IL) and CF pipe vibrations (two-degree-of-freedom pipes), Fig. 1. Two-degree-of-freedom vortex-induced vibration of a pipe in waves has been less studied which it is investigated experimentally in this case and the pipe diameter effect is considered.

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