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Ocean Engineering 30 (2003) 1453–1466



www.elsevier.com/locate/oceaneng

Forces on partly buried, tandem twin cylinders in waves at low Keulegan-Carpenter numbers

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Received 3 July 2002; accepted 18 December 2002

Abstract

This study deals with the forces on the circular cylinder, laid on, or partly buried in the bed with a parallel twin dummy cylinder nearby and without it. They were determined by measuring the pressure distribution on the cylinder in the case of wave at low KC numbers. The forces on the cylinder were calculated by the integration of the measured pressures determined by pressure transducers on the surface of the cylinder. Force coefficients were obtained for the low KC numbers (KC < 5), for the burial - depth - to - the diameter ratio = 0–0.7. The distance between axis of the measurement and dummy cylinders to diameter ratio (x/D) was 2, 1.5 and 1. The dummy cylinder was replaced downstream and upstream of the measurement cylinder.

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Keywords: Hydrodynamic forces; Tandem cylinders; Buried and unburied cylinders; Wave; Low KC

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