Direct Boundary Element Method in Wave Interference Analysis.

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ABSTRACT

Numerical calculation procedures are presented for computing the wave diffraction by surface-piercing structures in an ocean of finite depth by the Boundary Element Method. Both direct and indirect boundary elements have been investigated. The more accurate direct formulation is used to calculate the wave interference effects on multiple structures. Comparisons between the present results and results available from analytical, source distribution and finite element methods are good. Therefore, this direct boundary element method provides an alternative calculation procedure for multiple wave interference analysis, especially when the structures are at some distance apart.

Key Words: Wave Interference, Boundary Element, Multiple Structures, Wave Force.