

A Review on the Hydrodynamic Characteristics of Caisson Breakwater

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Abstract : Caisson breakwaters are gravity structures resting on the seabed and piercing the free surface sunk in coastal waters to break the energy in the waves and protect the water area behind them by creating tranquil conditions on its lee side for the purpose of berthing of vessels. A number of formula and methodologies have been proposed for calculating the forces on caissons due to waves, most of which being evolved through intensive laboratory and field measurements. The reflection of waves from such breakwaters often generates clapotis, leading to an amplification of waves in its vicinity. This result in increased pressures and forces, forcing researchers to modify its seaside shape as well as placing dissipaters in the form of screens. Apart from the above aspects, this paper also discusses the other important phenomena, like overtopping that dictates the stability of caisson breakwaters.

Keywords : caisson breakwater, Jarlan type breakwater, screens, circular breakwater

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