

رتبه سوم خارجی Foreign Third Winner

Project Title:

Sine - Slab System for Erosion Control

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عنوان طرح:

روش جدیدی برای جلوگیری از فرسایش سواحل

محقق:

دکتر نورعینی حاجی مختار

کشور:

مالزی

دانشگاه:

صنعتی مالزی

Abstract:

A special new design of coastal protection structure or revetment for the protection of slopes and banks from erosion has been invented. Conceptually, the innovative design has the objective that incorporates the capability of pre - cast concrete structure to withstand the hydraulic loading which includes forces and pressures. These parameters are associated with the cyclic loading of mass of water containing fine sediments with high energy that attack the surface. Hydraulic model investigation and simulation of extreme conditions have been simulated for models at scales of 1:3 and 1:5 in the laboratory. The Sine - Slab prototype is made of reinforced concrete with unique features and shape, weighing about 50 kg which is suitable for wave heights maximum at 2 m. The system performance is being tested as a pilot project for a revetment slope of 1:3 at Tg. Keling Melaka, West Coast of Malaysia.

As part of the revetment system, the construction includes installation of the gravel and filter layer beneath the Sine - Slab, sand fill, seawall, toe protection and beach. There is a great possibility that Sine - Slab will be produced in different sizes and weights, to cater for different site conditions. The applications include shore and dam protection, land reclamation, flood mitigation, beaches, marinas, channel improvements and for slope protection at ship berths and harbours.