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Design Optimization of the Protection Rubble Mound Seawall of Shahid Beheshti Port by Physical Modeling Tests Results

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Introduction

Shahid Beheshti Port is located along south eastern coastline of Iran, in the province of Sistan-Baluchistan. Protection rubble mound seawall has been designed at the eastern part of Chabahar Bay coast to protect the Coastline of Shahid Beheshti Port area. In order to evaluate the efficiency of the designed seawall structure, Ports and Maritime Organization (PMO) has asked to realize two dimensional physical modeling study of the Seawall structure.

In this paper the 2D physical modeling results of the seawall responses under irregular wave attack that yielded to change and optimize the initial designed section is presented.

The section 5 of the seawall was selected as the critical section based on the section location, beach steeper slope and wave propagation conditions in the site. The site plan and the location of the seawall section are illustrated in Fig. .

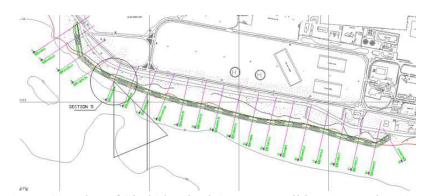


Fig. 1) Site plan of Shahid Beheshti port seawall location and section 5

Data

The protection seawall section 5, hereafter known as the critical section of whole of Shahid Beheshti port coastal protection seawall, for initial design is composed of stone materials including three weight ranges at the armuor layer (sea-side) and toe berm as heavy armour unit and the others at the filter layer and core of the structure with specific grading and