

COASTAL PROTECTION IN KENJERAN SURABAYA, EAST JAVA, INDONESIA

Seawalls and Shoreline Structures

Problem

The location for this project in Kenjeran (Surabaya, Indonesia). In the beginning Resident Department of Surabaya as the owner of this project, design using sheet piles or concrete structures for the solution to protect the coastal area from the abrasion. Because this design can be so expensive to built, the department asked Maccaferri to propose cost effective solution.

Solution

A 340m long gabion sea wall was installed to protect it against tidal wave that can be erosion issue in the coastal area. Countermeasures to face the risk of toe scour and structure collapse were taken. 50cm thick of gabions and 60 cm thick and 3 m long Reno Mattresses as foundation and 4m height of gabion as the wall structure were installed to minimize the risk of structure failure due the tidal processes. In fact, even in case of severe toe scouring due to tidal action, the flexible structure of Reno mattresses will accommodate the foundation deformations. All the double twisted wire mesh products used were Galfan (Zinc-Aluminum alloy) and PVC coated in order to avoid wire mesh to be rusty in terms of structure durability. A non-woven geotextile (MacTex) with a separation function was placed between gabions and backfilling material.

Client: RESIDENT DEPARTMENT OF SURABAYA

Designer / Consultant: N/A

Contractor: N/A

Products used (Qty.)

- Gabion N/A

Date of construction: 05/2016 - 11/2016



Site Location



Before Construction



During Construction



Finished Structure



Finished Structure