

RIVER BANK PROTECTION GRESIK GRESIK, EAST JAVA, INDONESIA

Longitudinal Protection

Problem

The Ministry of Public Work planned to strengthen the water courses of the irrigation system in Gresik Regency (East Java). The target was to install a durable channel lining in order to limit the erosion processes and to minimize the channels maintenance works carried out every year. In fact, during the months of the rainy season, the channels cross section are usually severely damaged by the erosion processes and continuous earthworks is required in order to restore the original shape. The estimated design water flow velocity is equal to 3 m/s.

Solution

Maccaferri proposed a reliable solution using a revetment made from Reno Mattresses in order to provide protection against the erosion affecting the banks of the channels. The designed lining system is a continuous protection using 30 cm thick of Reno Mattresses placed on a nonwoven geotextile with separation function.

Reno Mattresses are flexible modular elements which allow high levels of deformation and settlements without compromising the river lining integrity. Gabions and Reno Mattresses have shown to be a valid alternative to the use of stone masonry revetments traditionally used in Indonesia as river protection both in terms of flexibility, durability and cost effectiveness.

All the double twisted products involved are Galfan (Zn+Al) and PVC coated in order to guarantee high durability when used in river training works.

Maccaferri supported the Client with detailed design and construction drawings.

Furthermore, Maccaferri provided the Client with jobsite supervision and the Contractor with installation assistance in order to ensure that the highest construction and installation standards were followed.

Client: MINISTRY OF PUBLIC WORKS

Designer / Consultant: N/A

Contractor: N/A

Products used (Qty.)

- Reno Mattress N/A

Date of construction: 05/2016 - 12/2016



Reno Mattresses Installation



Reno Mattress Stone Filling



Completed Structure