

PROJECT CASE

LA COUARDE SUR MER seawall Ile de Ré (17)

Date

August 2020

Surface area

1,500 m²

Product(s)

NOTEX GX 100-50

Company

Charier TP

Project owner

Charente-Maritime departmental
council

Project management

EGIS
GEOTEC

Issue(s)

Because of the clay materials used for waterproofing purposes, the construction of a seawall poses many internal stability challenges. It must be implemented by earthwork companies specialising in this type of material, and in-depth geotechnical studies must be carried out to validate its resistance over time on the downstream and upstream sides.

The protective seawall of La-Couarde-Sur-Mer being no exception, AFITEXINOV supported the project by proposing soil reinforcement solutions.

Solution(s)

As rotational stability on the continental side showed flaws during the G2 PRO study commissioned by the project manager, a solution based on reinforcing geosynthetics was chosen.

As clay is a thin material that interacts with geosynthetics differently from other types of soil, AFITEXINOV launched a test campaign to validate soil/geosynthetic friction with its NOTEX GX fine-mesh geogrid. As a result:

- A small-mesh geogrid optimises friction with fine particles of soil at the core of the seawall;
- Reinforcement in accordance with applicable standards helps improve the safety factor on stability, thus preventing the structure from collapsing;

Study by AFITEXINOV in conjunction with Charier TP.



Preparation of the geogrid on site



Start unrolling before cutting widths

Description and purpose of the product

The structure of the NOTEX GX geocomposite, based on thin meshes, consists of high-strength polymer cables which are assembled by weaving-knitting-warp knitting. It comes in rolls 5.30 m wide and 100 m long. It has the ASQUAL certification for several resistance ranges.



Storage of NOTEX GX 100-50

Work progress



Preparation on substrate, cutting and stitching of geogrids



Backfilling on geogrids

Advantages of the proposed solution

This solution helps:

- Guarantee seawall stability thanks to a manufactured, easily implemented solution;
- Avoid the use of more cumbersome methods such as the installation of stabilising piles or nailing;

