Port of A Coruña - Langosteira II - West breakwater

country
Spain

owner
Port Authority of A Coruña

contractor
Joint Venture SATO Dragados, Arias Hermanos and Drace

Construction period

presupuesto
35,911,934.76 €

Background
In 2014, the Port Authority of A Coruña calls for tender the Project “Execution of the West breakwater and filling of the Ribera explanade in the new port facilities in Punta Langosteira”, with the aim of complementing the protection offered by the principal breakwater of Langosteira, in order to guarantee the proper operability of the new port facilities.

This Project planned the prolongation of the south breakwater to complete the secondary breakwater of the port. The projected breakwater included a double layer solution with cubic blocks of 50 t (21.3 m³) in the round-head and 25 t (10.6 m³) in trunk, leaving the possibility of an alternative design in terms of protection armor unit.

Finally, the work was awarded to the alternative design proposed by JV SATO, DRAGADOS, ARIAS HERMANOS and DRACE, which replaced the blocks for CUBIPODS.

Design conditions
- Structure length: 877 m
- Max. depth: 22 m
- Design wave height: 8.75 m
- Peak period: 18 s
- Slope H/V = 3/2
- CUBIPOD single-layer in trunk of 25 t and 30 t, and double-layer in round head of 45 t.
- Crown wall: +17 m
- 3D stability and overtopping test by Water and Environment Engineering (GEAMA)

Constructive aspects
- 5,418 CUBIPOD 25t (10.6 m³)
- 891 CUBIPOD 30t (12.8 m³)
- 1,772 CUBIPOD 45t (19.1 m³)
- Total CUBIPOD concrete volume: 102,878.6 m³
- 14 molds of CUBIPOD 25 t
- 5 molds of CUBIPOD 30 t
- 6 molds of CUBIPOD 45 t