



Coastal Protection Works

Name: Job Order for the Restructuring and Consolidation of the Spurs at Restinga and Ofir

Client: Polis Litoral Norte - Sociedade para a Requalificação e Valorização do Litoral Norte, SA

Building inspectors: Consulmar - Projectistas e Consultores, Lda

Project planning: Proman - Centro de Estudos e Projectos, SA

Period of completion: 2013 - 2014

Contract works:

The purpose of this job order was the restructuring and consolidation of the spurs at Restinga and Ofir, with the re-profiling and placement of rock fill of various ranges, depending on the area of the spur.

The works carried out on the two spurs were identical. They consisted on the reconstruction of the head area with rock fill from 60 to 90 kN as well as the execution of a bench at the base of the slope. On the existing holes was placed rock fill from 100 to 500 kN and the slopes' trunk of the spur were re-profiled with the placement of rock fill from 30 to 60 kN. The rooting took rock fill from 10 to 30 kN, and the spur of Ofir had no change to the existing profile, lowering the elevation of the existing crest by 1 meter and on the spur of Restinga were removed the light stone rows on the first 50 meters of the rooting whilst respecting the existing levels.

Main quantities:

Spur at Restinga:

Rock fill from 60 a 90 kN: 2940m³
Rock fill from 30 to 60 kN: 790m³
Rock fill from 10 to 30 kN: 90m³
Rock fill from 100 to 500 kg: 400m³

Spur at Ofir:

Rock fill from 60 a 90 kN: 2450m³
Rock fill from 30 to 60 kN: 200m³
Rock fill from 10 to 30 kN: 60m³
Rock fill from 100 to 500 kg: 300m³