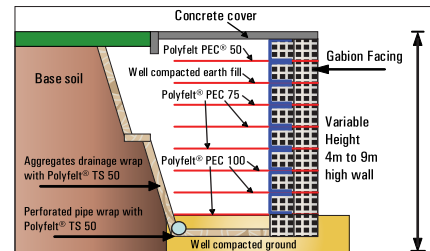


Polyfelt® PEC reinforcing geotextile

Vertical wall for Laeuna de Taal Leisure Development Project, Philippines

Project Data

Project	: Laeuna de Taal Leisure Park, South Luzon, Philippines
Consultant	: ESCA Engineering
Client	: Filinvest Land Incorporated
Contractor	: Marcbilt Construction Corporation
Products Used	: Polyfelt® PEC 50, 75, 100 reinforcing geotextiles Polyfelt® TS 50 non-woven geotextile



Typical cross section.

Overview

This lakeside resort project is nature oriented with emphasis to use environmental friendly material.

Applications

Construction of a 9m high vertical wall was carried out locally available stone filled gabion facing and reinforced with Polyfelt® PEC 50, 75 and 100.

Polyfelt® TS 50 non-woven geotextile was used to wrap around the aggregate as cut off drain and also prevent soil piping through the stone.

Polyfelt® PEC high strength geotextile is a composite geotextile consisting of high tenacity polyester yarns and continuous filament non-woven geotextile. The high tenacity yarns provide the tensile strength required for reinforcement while the non-woven geotextile facilitates in-plane drainage and optimum reinforcement / soil friction interface.

Due to the unavailability of granular soil backfill on-site the use of stone gabion, residual soil and Polyfelt® PEC reinforcement is the most cost effective option when compared with other alternative solution.

Installation

Prior to installation a well compacted platform was prepared using 10ton roller. Gabion basket was position in their geometric alignment prior filling of stones; Polyfelt® TS 50 was wrapped behind the gabion basket for filter function.

Polyfelt® PEC high strength geotextile was

then laid with reinforcing yarns facing the ground. Pre-tensioning of Polyfelt® PEC high strength geotextile was done by pacing across a 200mm x 300mm wide anchor trench and backfill with soil.

Compaction was done at every 300mm thickness off soil and field density test (FDT) was carried out on random basis to ensure 90% proctor compaction was achieved. The vertical spacing of each layer of Polyfelt® PEC high strength geotextile was 1.0m

The project was successfully completed on time, within budget and their concept.



Plan view of base foundation layer.



Compaction with 1 tonne walk behind compactor at the MSE wall edge.



Completed Polyfelt® PEC reinforced gabion wall.

Polyfelt® is a registered trademark of TenCate.

Further details of this application and products can be obtained by contacting your nearest TenCate Technical Support Office.

Unauthorized reproduction and distribution prohibited. This document is provided as supporting service only. The information contained in this document is to the best of our knowledge true and correct. No warranty whatsoever is expressed or implied or given. Engineers wishing to apply this information shall satisfy themselves on the validity of the input data relative to the applicable soil and engineering conditions and in doing so assume design liability.