

CASE HISTORY

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TECHTUBE GEOTEXTILE TUBES FOR PROTECTION OF EXISTING GEOTEXTILE TUBE PROTECTED ISLAND AT CHERUVATHUR FISHERY HARBOUR, KASARAGOD, KERALA KASARAGOD, KERALA, INDIA

Coastal Protection

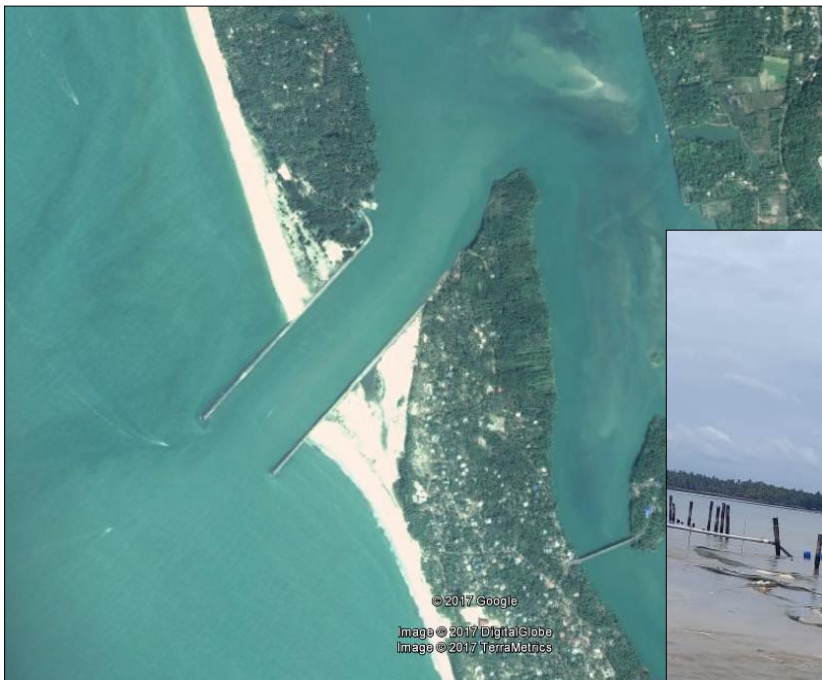
Client:	Products used:
HARBOUR ENGINEERING DEPARTMENT, KERALA	TECHTUBE GEOTEXTILE TUBES
Main contractor:	Quantity supplied:
K J ROBERT	
Manufacturer & Supplier:	Year of construction:
TECHFAB (INDIA) INDUSTRIES LTD.	2022

Problem:

Cheruvathur fishing harbour also known as Madakkara fishing harbour located around 4km from Cheruvathur town in Kasaragod district, Kerala.

During the year 2018 - 2019, the Harbour Engineering Department constructed the 15 acre artificial island (400m long and 150m wide) in the river near Madakkara fishing harbour. This artificial island was built using sand dredged from the river to create a boat channel for the smooth passage of fishing boats and canoes to and from the Madakkara harbour. This was protected by geotextile tubes.

Due to the illegal mining of sand along the north west portion near to the sea of this island, the shoreline had been exposed to severe erosion, caused sinking of existing geotextile tubes. Now some area of this island is utilized for Miyawaki (Akira Miyawaki) jungle works and this island is a protection to the landed craft on the basin against the sea waves. So it was necessary to protect the coastline by placing a new layer of Geotextile Tubes of length about 340m near the existing Geotextile tubes on the shore side.



View of Artificial Island near Madakkara fishing harbour

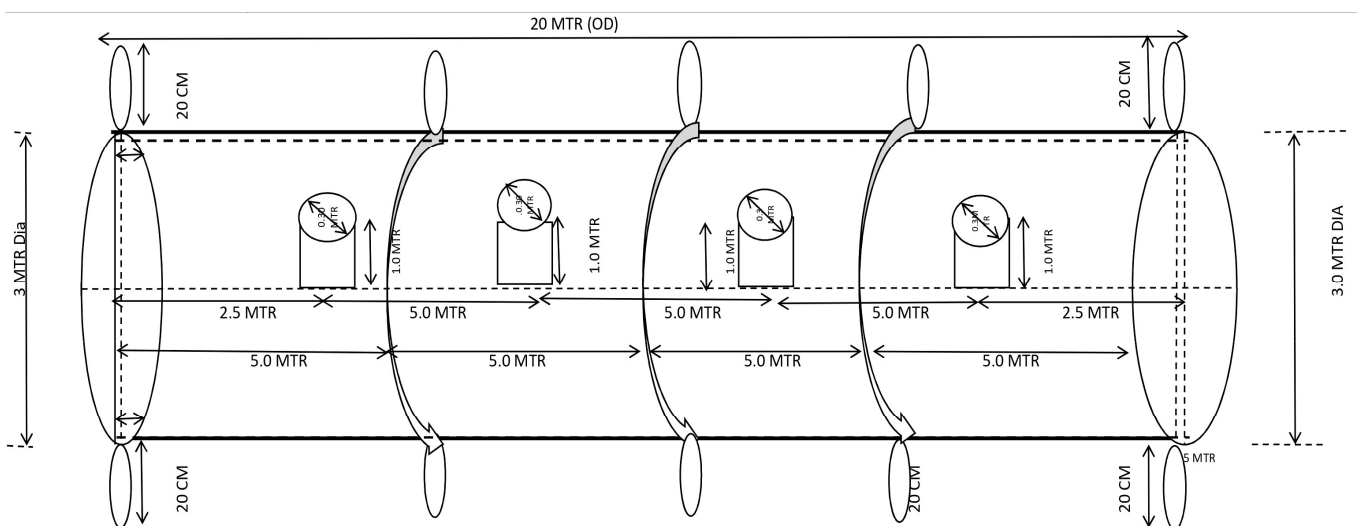


Damaged existing Geotextile Tubes

Solution:

TechTube Geotextile Tubes made of engineered high strength woven fabric filled with dredged material, have been used to protect the existing Geotextile Tubes and to prevent erosion of the beach. Geotextile tube technology has changed from being an alternative construction technique and, in fact, has advanced to become the most effective solution of choice to protect the shorelines.

The Geotextile tubes are sustainable since being manufactured from high-quality Virgin Polypropylene material can offer the function of containment, filter, and reinforce soil. The permeability of the soil fill and geotextile has a significant influence on the tube structure. The geotextile for tube manufacturing has been selected based on the performance requirement parameters like strength; filter (AoS); type of infill soil material; seam strength & durability parameters, etc.



Typical Cross section drawing

Advantages of using Geotextile Tubes:

Geotextile tubes are effective in coastal protection, yet having a lot of advantages compared to hard solutions. Installation of geotextile tubes enables the nourishment of the beach with minimal time because only simple equipment and procedures are involved. Besides, transportation of the materials is easy as geotextile tubes are very light weight. The geotextile tubes are very flexible structures as they can be removed any time when no longer needed. Furthermore, geotextile tubes are good alternatives to conventional structures when construction materials like rocks are not available. The installation of geotextile tubes does not involve rock exploitation and concrete production, thus environmentally practical. Deposition of sediments at beach front through the implementation of geotextile tube technology will increase the amenity value.



Laying of TechTube Geotextile Tubes in progress



During Construction Photographs



During Construction Photographs



After Construction photographs

Present Status of the Project:

The project completed successfully in June 2022, and performing to the intended purpose, to the satisfaction of client and contractor.

For further details kindly contact :

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