

Geotextile tubes used in a wind-blown sand remediation project in taichung harbor north siltation area

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Abstract

The project located in between the Taichung Harbor north breakwater and north groin. Since the Taiwan 921 earthquake, the amount of sediment has doubled increased. The wind-blown sand not only inundated coastal recreation areas, but also endangers the Wuchi fishing port and the Taichung Harbor. Taichung Harbor is an artificial port and the annual cargo handling capacity accumulates up to more than 100 million tons; Taichung Harbor as an important transportation hub in central Taiwan. The coast predominant direction of sediment transport by the north to south, under the influence of the Tachia River annual sediment transport and the north breakwater groin effect, causing the sediment continued siltation in the harbor north side silt zone. If the action is not taken and remediation the silt zone; there will decrease the sand storage capacity of silt zone year by year, resulting the shoaling phenomenon in the seabed. Further affect the outer channel depth and the operation of Taichung Harbor. Therefore, the wind-blown sand and drift sand remediation is the important subject for Taichung Harbor.

Keywords: Geotextile Tube; Groin; Sediment; Beach Nourishment; Wind-blown sand

