World Academy of Science, Engineering and Technology
International Journal of Environmental and Ecological Engineering
Vol:11, No:10, 2017

Case Study: Geomat Installation against Slope Erosion

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Abstract : Erosion (soil erosion) is a phenomenon in which the soil on the slope surface is exposed to natural influences such as wind, rainfall, etc. in open areas. The most natural solution to prevent erosion is to plant surfaces exposed to erosion. However, proper ground and natural conditions must be provided in order for planting to occur. Erosion is prevented in a fast and natural way and the loss of soil is reduced mostly. Lead to allowing plants to hold onto the soil with its three-dimensional and hollow structure are as follows: The types of geomat called MacMat that is used in a case study in Turkey in order to prevent water carry over due to rainfall. The geosynthetic combined with double twisted steel wire mesh. That consists of 95% Zn–5% Al alloy coated double twisted steel wire based that is a reinforced MacMat (geosynthetic three-dimensional erosion control mat) obtained by a polypropylene consisted (mesh type 8x10-Wire diam. 2.70 mm–95% Zn–5% Al alloy coated). That is developed by the progress of the technology. When using reinforced MacMat on top clay liners, fixing pins should not be used as they will rupture the mats. Mats are simply anchored (J Type) in the top trench and, if necessary, in intermediate berm trenches. If the slope angle greater than 20°, it is necessary to use additional rebar depending soil properties also. These applications may have specific technical and installation requirements. In that project, the main purpose is erosion control after that is greening. There is a slope area around the factory which is located in Gebze, İstanbul.

Keywords : erosion, GeoMat, geosynthetic, slope
Conference Title : ICACP 2017 : International Conference on Avalanche Control and Prevention
Conference Location : Istanbul, Türkiye
Conference Dates : October 26-27, 2017