Recovery of Dredged Sediments With Lime or Cement as Platform Materials for Use in a Roadway

Authors: Abriak Yassine, Zri Abdeljalil, Benzerzour Mahfoud., Hadj Sadok Rachid, Abriak Nor-Edine

Abstract: In this study, firstly, the study of the capacity reuse of dredged sediments and treated sediments with lime or cement were used in an establishment layer and the base layer of the roadway. Also, the analysis of mineral changes caused by the addition of lime or cement on the way as described in the mechanical results of stabilised sediments. After determining the quantity of lime and cement required to stabilise the sediment, the compaction characteristics were studied using the modified Proctor method. Then the evolution of the three parameters, that is, ideal water content and maximum dry density had been determined. Mechanical exhibitions can be assessed across the resistance to compression, flexibility modulus and the resistance under traction. The resistance of the formulation treated with cement addition (ROLAC®645) increase with the quantity of ROLAC®645. Traction resistances and the elastic modulus were utilized to assess the potential of the formulation as road construction materials utilizing classification diagram. The results show the various formulations with ROLAC®645 may be employed in subgrades and foundation layers for roads.

Keywords: cement, dredged, sediment, foundation layer, resistance

Conference Title: ICACCE 2022: International Conference on Advanced Civil Construction and Engineering

Conference Location: Auckland, New Zealand

Conference Dates: December 02-03, 2022