IJARSCT
International Journal of Advanced Research in Science, Communication and Technology
International Open-Access, Double-Blind, Peer-Reviewed, Refereed, Multidisciplinary Online Journal
ISSN: 2581-9429
Volume 5, Issue 5, May 2025
Impact Factor: 7.67

Comparative Study On Soil Stabilisation with and without Coconut Coir

Dr. N. Sathyakumar[1], S. Aswinkumar[2], S. Dhanush[3], K. S. Gowtham Babu[4], R. Rajashree[5]
Assistant Professor, Department of Civil Engineering[1]
UG Students, Department of Civil Engineering [2,3,4,5]
Sri Shakthi Institute of Engineering and Technology, Coimbatore, India

Abstract: *To make use of locally available soils, soil strength should be increased because every time it is not possible to find required or specified strength in locally available soils. Soil strength can be increased by adding stabilizing agents like lime, cement, fly ash, fibre etc. Use of natural fibre in civil engineering for improving soil properties is advantageous because they are cheap, locally available, biodegradable and eco-friendly. The coir fibre reinforcement causes significant improvement in bearing capacity and shear strength and other engineering properties of soil. The experimental study is conducted on locally available soil reinforcement with coconut coir fibre. Soil sample is prepared at its maximum dry density corresponding to its optimum moisture content (OMC). The percentage of coir fibre by dry weight of soil is taken 0%, 0.25%. The index properties of soil tests is conducted and shear strength of soil is compared before and after adding of coir fibre to the soil*

Keywords: Soil Stabilization, Coir fibre, OMC, Shear Strength, Index properties

DOI: 10.48175/IJARSCT-26662