



# SRINIVAS UNIVERSITY

College of Engineering and Technology,  
Mukka, Mangalore-574146,  
Karnataka (India)

## RESEARCH CENTRE FOR ENGINEERING GEOLOGY AND ENVIRONMENTAL ENGINEERING DEPARTMENT OF CIVIL ENGINEERING



**Dr. NAGARAJA A**

The research is focused on the geophysical survey using Resistivity meter to determine the underground layers, and availability of fresh water and saline water. The study was conducted at Srinivas Integrated Campus at Mukka in Mangaluru, Karnataka. The values obtained from the Resistivity meter were tabulated and analysed by drawing bi-log graph. Various properties of water sample were determined and compared with standard values. Availability of fresh water and saline water at different depth were also determined.

The collected water samples were analysed in the Environmental Engineering laboratory for various tests viz; pH, Alkalinity, Turbidity, Hardness, Ca, Mg-tests. Alkalinity is primarily a way of measuring the acid neutralising capacity of water. The need for water quality information may arise from a number of different sources. Such as Environmental health officers who have to assess the quality of domestic water at the point of use or in the distribution system. Analytical values obtained that have compared with IS and WHO standard values, the water samples from the project polluted. The drainage system is poor in areas which leads to pollutants are percolated to the nearby open wells or tube wells and water get polluted. And also, water may not be able to support life. One of the governing factors on which safety of civil engineering structure depends is material used in construction. Materials used for the construction of walls are normally required to possess adequate strength and erosion resistance. The study investigates the suitability of stabilized laterite soils for the production of compressed earth blocks for low-cost housing construction. The materials which is used for this experiment is red soil and some chemicals. The results of the study revealed that the specific gravity, bulk density, moisture content and plasticity index of the sample showed satisfactory performance. This experimental mainly deals with the manufacture of compressed stabilised earth blocks by using chemicals. The blocks are tested under CTM for compressive strength. The cost comparison with the conventional bricks has revealed that compressed cement stabilised soil block is preferred because it is more economical walling material in itself and permits the use of economical building techniques.

Group Members:

1. Dr. Ramakrishna Hegde
2. Dr. Narayana Hebbar

## **RESEARCH WORK**

- Completed Doctoral Degree from Bangalore University in the year 1996 under the guidance of Dr. S.G. Phene, Professor Department of Geology.
- Research Topic: “STUDY OF THE METASEDIMENTARY ENCLAVES ALONG THE WESTERN MARGIN OF THE CLOSEPET GRANITE” KARNATAKA.
- This research helps to identify the precious and semiprecious minerals available in the Karnataka state.
- This research also helps to evaluate the Age of the rocks as well as formation of the crustal layers.

## **Publications**

- 1) **Nagaraja A**, Ramakrishna Hegde, Narayana Hebbar, Shrinath Rao K, “An Experimental approach for the investigation of Fresh water at Srinivas University Campus, Mukka, Mangaluru, Karnataka, India, “International Research Journal of Engineering and Technology (IRJET), Volume: 05 Issue: 07, July 2018.
- 2) **Nagaraja A**, Shilpa S, Ramakrishna Hegde,” Study on Compressed Stabilised Earth Blocks by Using Master Cast and Master Emaco Chemicals”, International Research Journal of Engineering and Technology Volume: 05 Issue: 06, JUNE 2018.
- 3) **Nagaraja A**, Shilpa S, Ramakrishna Hegde,” Study on Compressed Stabilised earth blocks by using Chemical Admixture”, International Research Journal of Engineering and Technology (IRJET) Volume: 05 Issue: 06, June 2018.
- 4). Nagaraja A, Dilmohan, Mohind Mohan, Bhavin Bhaskaran: “Study on compressed stabilised earth blocks using Algi-plast admixtures”, International Journal of Applied Engineering and Management Letters (IJAEML). volume02, Issue 02, July 2018.
- 5) Water Resources Engineering: National Conference on Latest Trends in Civil Engineering, Aug 2015, VCET, Puttur, Karnataka, India.