Proceeding of the

National Conference

on

Recent Innovation in Engineering

22-23, February 2017

NCRIE-2017

Organised by

G. M. Vedak Institute of Technology, Tala

(Approved by AICTE, New Delhi, Recognized by DTE, Government of Maharashtra & Affiliated to University of Mumbai

Patrons:

Hon. Shri. Nandkumar Gopinath Vedak, Chairman GMVIT.
Hon. Shri. Unmesh Nandkumar Vedak, Secretary GMVIT.
Hon. Shri. J. K. Jadhav, Former Additional Director of Industries M.S.
Shri. S.P. Kulkarni, Registrar, GMVIT.

Technical Advisory Committee:

Dr. D.G. Borse, Principal A.C. Patil College of Engineering.
Dr. S.D. Sawarkar, Principal DMCE, Airoli.
Dr. P.P. Nagrale, Professor S.P.C.E. Mumbai.
Dr. S.B. Charhate, Professor & Dean, Pillai HOC,COET.
Dr. H. S. Chore, HOD DMCE, Airoli.
Dr. R.B. Buktar, Professor S.P.C.E. Mumbai
Dr. Kiran Bhole, Associate Professor S.P.C.E. Mumbai.
Dr. S.L. Nalbalwar, Associate Professor &HOD ,BATU, Lonere

Chief-Convener:

Dr. S.V. Patil (GMVIT, Principal)

Convener:

Prof. A. P. Patil (GMVIT, Dean)

Co-Conveners:

Prof. P.R. Kunekar (Computer)
Prof. Y.R. Galinde(Civil)
Prof. P.M. Dhongade (Mechanical)
Prof. S.E. Gawali (ExTC)

Chief-Coordinator:

Prof. V. H. Kshirsagar

Coordinator:

Prof. S. D. Jadhav
Prof. M. M. Badadare
Prof. R. O. Singh
Prof. S. R. Raut
Prof. D. D. Dalvi

ABSTRACT (EXTC ENGINEERING)

ABSTRACT (COMPUTER ENGINEERING)

ABSTRACT(CIVIL)

ABSTRACT (MECHANICAL ENGINEERING)

STUDY ON USE OF RECYCLED CONCRETE AGGREGATES AND GROUND GRANULATED BLAST FURNACE SLAG IN CONCRETE

DIPIKA D. DALVI
Civil Engineering Department
MES's Pillai HOC College of Engineering & Technology
Raigad, India
dipikad21@gmail.com

DR. S.B.CHARHATE
Civil Engineering Department
MES's Pillai HOC College of Engineering & Technology
Raigad, India
scharhate@mes.ac.in

ABSTRACT:- Consumption of concrete is increasing every year. Consumption of cement and conventional aggregates has to be reduced for sustainability. Supplementary cementations materials can be used as a replacement for cement and recycled aggregates for natural aggregates. The basic purpose is to make material substitutions and because of this cost, environmental impact of concrete could be reduced. Experimental investigation is carried out with a M35 mix, five concrete mixes were considered. These were, conventional mix with no recycled aggregates and GGBS, 100% replacement of natural aggregates with recycled concrete aggregates, 100% replacement of natural aggregates with recycled concrete aggregates and 55% replacement of cement with GGBS, 100% replacement of natural aggregates with recycled concrete aggregates and 65%replacement of cement with GGBS and, 100% replacement of natural aggregates with recycled concrete aggregates and 75%replacement of cement with GGBS. Compressive strength was found out and economic analysis is carried out for all mixes..

Keywords—ground granulated blast furnace slag, recycled concrete aggregates, compressive strength.

STABILIZATION OF LOCAL SOILS USING COMBINATION OF LIME AND ALCCOFINE

YUGANDHARA R.GALINDE
Research Scholar, Department of Civil Engineering, Pillai HOC College of Engineering and Technology, Rasayani, Dist. Raigad, Maharashtra, India
yuga.galinde@gmail.com

DR. S.B.CHARHATE
Professor, Department of Civil Engineering, Pillai HOC College of Engineering and Technology, Rasayani, Dist. Raigad, Maharashtra, India
scharhate@mes.ac.in

ABSTRACT:- This paper discussed the use of optimum percentage of lime, alccofine required for getting the maximum benefits. Two type of soils were used termed here as Soil A and Soil B and two types of stabilizers i.e. combination of hydrated lime and alccofine were selected in the present investigation. The Atterberg's limit, compaction test, California bearing ratio (CBR) tests were conducted on un-stabilized and stabilized subgrade soil for (2%, 4%and 6%) of lime and (3%, 6% and 9%) of alccofine stabilizers. Based on the test results, 6 % lime and 6% alccofine were selected as optimum stabilizer content. The flexible pavement was design with respect to IRC 37:2012 with traffic intensity i.e., 50Msa, 100Msa, 150Msa. Construction cost estimated for 1 km pavement section resting on un-stabilized and stabilized subgrade with different percentages of lime with alccofine. The study shows proportion percentage of the 2%, 4%, and 6% lime and 3%, 6% and 9 percent alccofine respectively will be more effective in material and cost optimization.

Keywords—Stabilization, Lime, alccofine, California Bearing Ratio, Economical Analysis.