BEST PROJECT LIST

BATCH 2014-15

S.no	VM No	Student Name	Project Title
1	6546	Raj Kenandy.N.M	Strength Evaluation of M20 Grade Concrete With Fluorescent Lamp Powder as partial replacement Concrete
	6569	Hariharan.T	
	6754	MuthuSaravanan.R	
	6564	Mahadevan.A.B	
2	6560	Rajavel.D	Comparative Study of Conventional Concrete and sulphur concrete
	6591	Thangadurai.P	
	6753	Manoharan.K	
	9760	Madhankumar.V	
3	9578	SeramSubhalakshmiDevi	Development of High strength concrete using Metakaolin and silica fume
	6599	Lalitha.D	
	6750	SindhyaBala.M	
	6755	Renuga.E	
4	6553	Hemalatha.D	Variation of soil properties by using fly ash and lime
	6577	Suganya.G	
	6589	Premalatha	
5	6599	Kavin.V.P	Experimental Investigation of strength characteristics Geopolymer concrete by using fly ash and Quarry dust(Without cement)
	6567	Gopalakrishnan.K	
	6584	Purushothaman.M	

STRENGTH EVALUATION OF M20 GRADE CONCRETE WITH FLUORESCENT LAMP POWDER AS PARTIAL REPLACEMENT CONCRETE

HARIHARAN.T (VM *6569*), RAJ KENNADY.N.M (VM *6546*),
MUTHU SARAVANAN (VM *6754*, MAHADEVAN (VM *6564*)

Guided by:

R.SUBALAKSHMI, M.E.,
Assistant Professor,
Department of civil Engineering,
Vel Tech Multi Tech Dr. Rangarajan Dr. Sakunthala Engineering College

Cement manufacturing industry is one of the carbon dioxide emitting sources besides deforestation and burning of fossil fuels. The global warming is caused by the emission of greenhouse gases, such as CO_2, to the atmosphere. Among the greenhouse gases, CO_2 contributes about 65% of global warming. The global cement industry contributes about 7% of greenhouse gas emission to the e3arth's atmosphere. In order to address environmental effects associated with cement manufacturing, there is a need to develop alternative binders to make concrete. Consequently extensive research is on-going into the use of cement replacements, using many waste materials and industry by products. Efforts have been made in the concrete industry to use waste glass as partial replacement of coarse or fine aggregates and cement.

In this project, finely powdered fluorescent lamps are used as a partial replacement of cement in concrete and compared it with conventional concrete. This work examines the possibility of using fluorescent lamp powder as a partial replacement of cement for new concrete. Fluorescent lamp powder was partially replaced as 5%, 10%, 15% and tested for its compressive, tensile strength up to 28 days of age and were compared with those of conventional concrete.

BEST PROJECT 2

COMPARATIVE STUDY OF CONVENTIONAL CONCRETE AND SULPHUR CONCRETE

RAJAVEL D(113111103029), THANGADURAI P(113111103049)

MADHAN KUMAR V(113111103306), MANOHARAN .K(113111103307)

Guided by:

C.suresh, M.E.,

Assistant Professor,

Department of civil Engineering,

Vel Tech Multi Tech Dr. Rangarajan Dr. Sakunthala Engineering College

To produce sulphur concrete, the material is heated approximately upto140°C. The sulphur is in a melted state at this temperature. The other raw materials for sulphur concrete are added to the melted material: sand, gravel and filler. These raw materials will also have been preheated. Once all the raw materials have been added, the material is poured and cooled in a controlled setting. The solidified product is sulphur concrete.

BEST PROJECT 3

DEVELOPMENT OF HIGH STRENGTH CONCRETE USING METAKAOLIN AND SILICA FUME

SERAMSUBHALAKSHMIDEVI (VM 9578),
LALITHA.D (VM 6599),
SINDHYABALA.M(VM 6750),
RENUGA.E(VM 6755)

Guided by:

Mr.C.MANIKANDAN, M.E.,
Assistant Professor,
Department of civil Engineering,
Vel Tech Multi Tech Dr. Rangarajan Dr. Sakunthala Engineering College

In this project we develop a high strength concrete using mineral admixtures such as metakaolin and silica fume. We use M60 grade of concrete. The silica fume is used to obtain high strength concrete and super plasticizers by the weight of cement are used to maintain the desired workability of cement. Concrete is the most commonly used material for construction. The worldwide production of cement has greatly increased since 1990.Production of cement results in a lot of environmental pollution as it involves the emission of CO2 gas. Supplementary cementitious materials (SCM) are finely ground solid materials that are used to replace a portion of the cement in a concrete mixture. These supplementary materials may be naturally occurring, manufactured or manmade waste. Various types of pozzolanic materials that improve cement properties have been used in cement industry for a long time. Metakaolin is a dehydroxylated aluminium silicate. It is an amorphous non crystallized material, constituted of lamellar particles. From the recent research works using Metakaolin, it is evident that it is a very effective pozzolanic material and it effectively enhances the strength parameters of concrete. This paper reviews the use of metakaolin as supplementary cementitious material in concrete. A detailed literature survey is carried out and presented here.

BEST PROJECT 4

VARIATION OF SOIL PROPERTIES USING FLY ASH AND LIME

HEMALATHA.D (113111103012),
PREMALATHA.S (113111103034),
SUGANYA.G (113111103047)

Guided by:

Mr.S.MANIKANDAN, M.E.,
Assistant Professor,
Department of civil Engineering,
Vel Tech Multi Tech Dr. Rangarajan Dr. Sakunthala Engineering College

Expansive soil shows volume changes with the changes moisture content, causing serious problems such as road pavements, foundation of structures resting on them. Flyash and lime is available abundant waste product which has high cementing property can be used for altering the characteristics of expansive soil. The index properties of the collected expansive soil samples were determined based on the parameters like particle size distribution,liquid limit,plastic limit, Free Swell Index. The strength paramaters were determined by compaction,permeability,consolidation. . The main objective of this work is to increase the strength of the expansive soil treated with flyash and lime in varying percentages. In some places, soil may be weak which cannot resist the oncoming loads. In such cases, soil stabilization is needed. Various methods are available in the literature for soil stabilization. In this study, fly ash and lime were mixed with clay soil to investigate the relative strength gain in terms of unconfined compression, bearing capacity and compaction. The effect of fly ash and lime on the geotechnical characteristics of clayey soil fly ash and clay lime mixtures was investigated by conducting standard Proctor compaction tests, unconfined compression tests, CBR tests and permeability test. The tests were performed as per Indian Standard specifications. The materials used for preparing the samples are Clayey soil, Fly ash and Lime.

.

BEST PROJECT 5

EXPERIMENTAL INVESTIGATION OF STRENGTH CHARACTERISTICS GEOPOLYMER CONCRETE BY USING FLY ASH AND QUARRY DUST(WITHOUT CEMENT)

K.GOPALAKRISHNAN (11311113008), V.P KAVIN (11311113016)

M.PURUSOTHAMAN (11311113032)

Guided by:

Mr.S.MANIKANDAN, M.E.,

Assistant Professor,

Department of civil Engineering,

Vel Tech Multi Tech Dr. Rangarajan Dr. Sakunthala Engineering College

The main aim of the project is to determine and comparing the strength of the geopolymer concrete against conventional concrete as well as we use the quarry dust in conventional concrete instead of fine aggregate. With the growth in infrastructure development and boom in the housing sector, the demand for cement is bound to increase. Due to environmental concerns of cement industry, there arises a strong need to make use of alternate technology which is sustainable. Geopolymer, an inorganic alumina silicate polymer is synthesized predominantly from silicon and aluminum materials or from by- product materials like fly ash. In the present work, an attempt is made to develop geopolymer concrete blocks at ambient curing condition and to investigate strength and durability aspects. The geopolymer blocks prepared here in without the use of cement. The materials considered are Flyash (Class F), Ground granulated blast furnace slag (GGBS), Quarry dust and sand. Sodium hydroxide & sodium silicate were used as alkaline activators. The experimental program involves casting of geopolymer blocks and testing the same for compressive strength. The parameter considered in this study is alkaline solution to binder ratio at 8M molarity. The result revealed that geopolymer concrete block develops strength at ambient curing conditions. The study is further extended to understand the economic impact and sustainability of geopolymer concrete blocks