# 3.2.2 Number of books and chapters in edited volumes/books published and papers published in national/international conference proceedings per teacher during last five years

1.Title of Book:-Real Time Shop-Type Recommendation System Author:- Prof.A.A.Chincholkar

Name of the publisher:-LAP LAMBERT Academic Publishing, Mauritius Year of Publishing:-2019

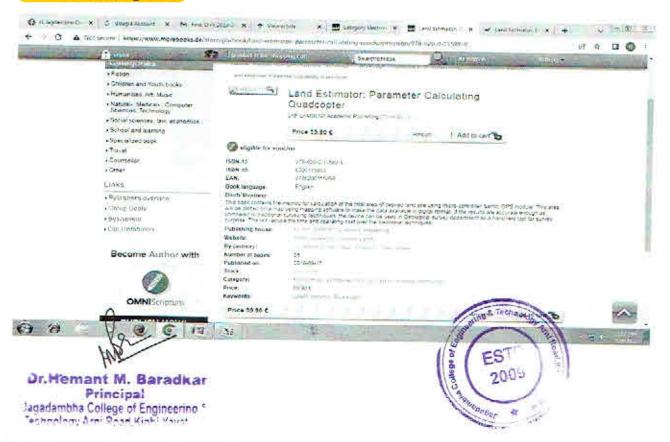


2. Title of Book:- Land Estimator: Parameter Calculating Quadcopter

Author: - Prof.A.A.Chincholkar

Name of the publisher:- LAP LAMBERT Academic Publishing, Mauritius

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Database Management System with NoSQL













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A database is a collection of data that is saved and organized to allow easy retrieval when needed. It is the collection of schema, tables, queries, reports, views, and other objects. Databases are not limited to only computers. Where databases are more complex they are often developed using formal design and modeling techniques. The database management system (DBMS) is the software that interacts with end users, applications, the database itself to capture and analyze the data and provides facilities to administer the database. The runs fotal of the database, the DBMS and the associated applications can be referred to Read more



Or. Hemant M. Baradkar Principal

Jagadambha College of Engineering s rechnology Arni Soad Kinhi Yaya'

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# Fundamentals of Data Structures and Algorithms

Data Structure and Algorithms



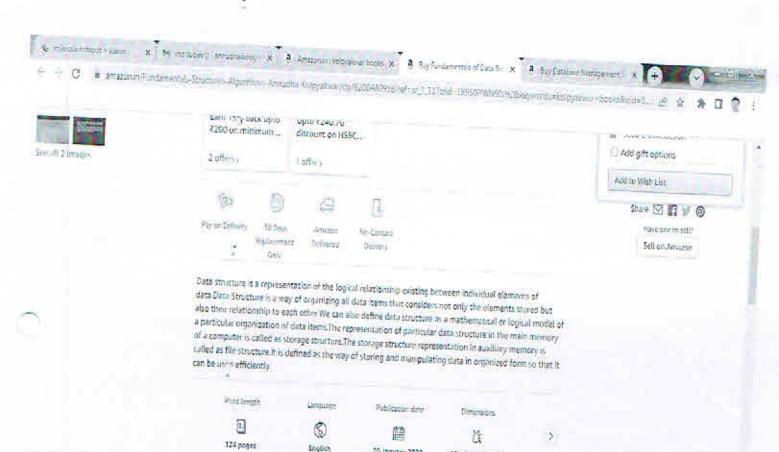






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## Floating Solar Power Plants: A Review

## Nitin Ingole<sup>1</sup>, Aniket Kelzarkar<sup>2</sup>, Pratik Rathod<sup>3</sup>, Ashish Bandewar<sup>4</sup>

1.2. Student, Mechanical Engineering, Jagadambha College of Engineering and Technology, Yavatmal (M.S.) India

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Abstract - Energy demand in this era has increased which led us to go for renewable energy sources; solar energy with this respect can fulfill the energy demand. This paper aims at review of the existing floating solar plants worldwide with respect to their capacity. Floating solar plants can save the area for generation. Limitations to such power plant are land availability, land development & land acquisition, substation capacities, evacuation also timely clearances for the project on land and evacuation. These are hurdles for completion of the project. Most of the locations projected by the government considering solar radiation data in the country are hot and dry regions. Though at these locations the radiation appeared to be higher, the energy yield of these points is less due to heating of the solar panels and higher temperature of the surface of solar cells. To overcome these problems an innovative idea has come in front for installation of solar power plants on the water that is canal tops, water bodies, lakes, dam backwater and reservoirs, which generally belongs to the government. This paper reveals review regarding the floating solar PV power plants installed in the world.

Key Words: Renewable energy, solar photo voltaic, solar power plants, floating Solar System, floating solar PV installations in the world, advantages of floating solar power plants, types of floating structures for solar power plants

### 1. INTRODUCTION

The biggest problem in our country is power crisis. Around 70% coal is used for generation of electric energy. Irrigation and industry production is get affected due to load shedding, daily shutdown, etc. So we need to move towards renewable energy sources to generate electricity.

Now a days renewable energy sources are growing fast not in just India but many other countries. Solar energy is clean, efficient and abundant source of alternative energy. The use of solar energy Solar energy decreases greenhouse effect. Area wise seventh largest country is India and has good sunshine. Solar energy is energy produced by sun created through a thermonuclear process and this process crates heat and electromagnetic radiations. These electromagnetic radiations have the energy that reaches the earth. Solar energy is the indirect source of energy so we need two main components: firstly the collector to collect radiations which are coming from the sun and convert it into the electrical energy form, secondly storage unit as radiations are varying in nature. To solve the energy crisis solar energy will be an excellent solution but to use land mounted solar system is the requirement of land which is very costly and less available to get it. India will generate up to 1.75 GW solar powers from renewable energy sources and 1 GW of solar power in upcoming 10 years. As per the Jawaharlal Nehru National Solar Mission around 5000 MW has been commissioned till date in different parts of the country. To make the country consuming green power in world, the progress is not just sufficient and needs hard efforts by every state and state departments.

Floating solar system has PV concentrator which is very light weight and it floats on water bodies, mounted on anchored rafts float on the surface of irrigation canals, water reservoirs, quarry lakes, and tailing ponds. Some of systems exist in France, India, Japan, Korea, the United Kingdom and the United States.

The floating solar system reduces the need of costly land area, it also saves the drinking water that would otherwise be lost due to evaporation, reduces the growth of algae. The solar system shows a higher efficiency as the panels are kept in cooler temperature than they would be on land area. The floating platforms are 100% recyclable, utilizing high density polyethylene which can withstand ultraviolet rays and corrosion. Floating solar is also called as 'SOLAR ARRAY 'or 'FLOTOVOLTAIC' or 'FLOATING PV'.

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## Floating Solar Power Plants: A Review

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## WASTE MINIMISATION FOR HIGHWAY CONSTRUCTION

Mr. Anurag K. Gahalod<sup>1</sup>, Mr. Vikas Bankar<sup>2</sup>, Miss Payal Nit<sup>3</sup>

Asst. Prof., Civil Engg., J.C.O.E.T. 2Asst. Prof., Civil Engg., J.C.O.E.T. 3Civil Engineering Student

Abstract - In present era, safe disposal of Industrial wastes is a great problem. These waste materials create environmental pollution because many of them are nonbiodegradable. India has large network of industrial which are in different parts of the country and many more are to come in the near future. Million metric tons of industrial wastes are produced in this industry. The pollution and disposal problems and minimized by utilizing these materials in highway construction. It is essential to test these materials and to find a new methodology and specification to increase the use of these industrial wastes in road construction in India. A review of various Industrial wastes to be used in the construction of highway has been discussed in this paper. The common waste materials are used are construction and demolition waste and tiles waste causing problems in the disposal.

keywords: C & D (Construction and Demolition) waste, Tiles waste, Ceramic waste, Industrial waste.

### INTRODUCTION

We know that the India is developing country which means that industrialization is growing day by day. Disposal issue of the waste products is a challenge now a day. Some of these waste materials are not biodegradable often leads to waste disposal crisis and environmental pollution. Due to increasing in waste volume and a shortage of landfill, waste management is becoming a more significant and important subject. The use of these materials in road making is based on technical, economic, and ecological criteria. India has vast network of industries located indifferent parts of country. Traditional soil, stone aggregate sand, bitumen, cement etc. are used for road construction. Natural materials being exhaustible in nature, its quantity is declining gradually. Also, cost of extracting good quality of natural material is increasing. If this material can be suitably utilized in highway construction, the disposal problem of the waste may beget reduced it will also help to reduce pollution. Keeping in mind the need for bulk use of these solid wastes in India, it was thought expedient to test these materials and to developed specifications to enhance the use of these industrial

wastes in road making, in which higher economic returns may be possible.

## MATERIAL EMPLOYED

Since construction and demolition waste are producing on large scale and ceramic (Tiles) wastes are also generating on large scale. Management of these waste is big problem that world is facing now. Here is the best way to manage these utilizing it in road construction. Hence, we are using these two materials.

### Sampling: -

Sampling is the process of collection of materials from their resources. Sampling of C and D waste and Tiles waste can be done as follows.

C and D - due to urbanization of construction domain is increasing drastically along with that environmental issue like landfill due to illegal dumping etc are also increasing and every man-made structure has a certain year of life span. Due to demolition construction waste is produce and due to less land availability disposing is a problem. So, C and D waste is collected from the site where the demolition process is going.



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## "Soil Stabilization by using Waste Material - Brick Dust"

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Abstract - As we know that India is a farmer's country. It indirectly says that the quality of soil present in most of regions is very good for farming. But with the rapid growth of population fast urbanization and big construction of building and other important structure has taken as to use good quality available land .Due to fast urbanization and other all things, there is no choice for people to use soft and weak soils around for construction activities such soil offers poor shear strength and high swelling and shrinkage. To make this type of soil workable it has to be improved by employing stabilization techniques. The construction on black cotton soil is the major issue in India. There are many material can be used to stabilize the black cotton soil, like cement, lime, rise husk ash, fly ash etc. But in this report we are using the brick dust as a stabilizing material. The results of various test were observed weather it improves the black cotton soil or not. By using various laboratory test.

KEYWORDS: Black cotton soil, Brick dust powder, stabilizations.

#### 1. INTRODUCTION

### 1.1 General

Black cotton soils are very fertile soils, they are not good as road or construction foundation. Black cotton soils are expansive clays with high potential for shrinking or swelling as a result of changing moisture content. Due to intensive shrinks well processes, surface crack resulting in openings during dry seasons.

These openings are usually more than 50mm wide and several millimeters deep. Cracks disappear during wet season but an uneven soil surface stays as a result of irregular swelling and heaving. The black cotton soils have low strength and are susceptible to excessive volume changes, making their use for construction purposes very difficult. Instability of these soils cause more damage to structures, than any other natural hazard, including earthquakes and floods, unless proper black cotton soil stabilization performed.

Expansive nature of this soil negatively affects its bearing capacity. When dry, black cotton soil is so hard that the clods cannot be easily pulverized for treatment for its use in road construction. This leads to serious problems related to consequent performance of the road. If black cotton soil stabilization is not applied, the damage will be apparent usually several years after construction. replacement of expansive soil with a no expansive material is a common method of reducing shrinks well risk. In the case when expansive soil or stratum is thin, then the entire layer can be removed. However, often the soil or stratum extends too deep and in that case this method is not economically efficient.

This problem can be by overcome by using Brick Dust in infrastructure projects such as highways, railways, water reservoirs. SinceBrick Dust is freely available for the project in the vicinity of brick manufacturing plants, it can be used for stabilization of soft fine grained soil.

#### 1.2 Soil Stabilization

"Soil stabilization is a technique aimed at increasing or maintaining the stability of soil mass and chemical alteration of soil to enhance their engineering properties."

Stabilization allows for the establishment of design criteria as well as the determination of the proper chemical additive and admixture rate to be used in order to achieve the desired engineering properties. Benefits of the stabilization process can include higher resistance values, reduction in plasticity, lower permeability, reduction of pavement thickness, elimination of excavation material hauling or handling. Stabilization of expansive soils with admixtures controls the potential of soils for a change in volume, and improves the strength of soils.

Soil stabilization is done by various methods by adding fly ash, rise husk ash, chemicals, fibers, adding lime, by different geo materials like geo synthetic, geo grid and geo form. Soil stabilization allows engineers to distribute a steck a larger load with less material over a longer life cycle.

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## A Review Article on Study Analysis of T-Beam Bridges by Finite Element Method and Courbon's Method

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<sup>2</sup>Assistant Professor at Department of Civil Engineering, Jagadambha College of Engineering and Technology Yavatmal Maharastra, India

Abstract — T-beam bridge decks is one of the principal types of cast-in place concrete decks. It consist of a concrete slab integral with girders. A T-beam bridge was analyzed by using I.R.C. loadings as a one dimensional structure and also T-beam bridge is analysed as a threedimensional structure by using finite element plate for the deck slab and beam elements for the main beam using software .Both models are subjected to I.R.C. Loadings to produce maximum bending moment. We are study from this result the finite element model are lesser than the results obtained from one dimensional analysis by Courbon's Method, that means the results obtained from manual calculations subjected to IRC loadings are conservative.

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Key Words -T-Beam, Finite Element Method, Courbon's Method

### 1. INTRODUCTION

A T-beam used in construction, is a load-bearing structure of reinforced concrete, wood or metal, with a tshaped cross section. The flange (Horizontal Section) or ompression member of the beam in resisting compressive stresses. The web (vertical section) of the beam below the compression flange serves to resist shear stress and to provide greater separation for the coupled forces of bending

In some respects, the T-beam dates back to the first time a human formed a bridge with a pier and a deck. After all, a T-beam is, in one sense, no more than a pillar with a horizontal bed on top, or, in the case of the inverted T-beam, on the bottom. The upright portion carrying the tension of the beam is termed a web or stem, and the horizontal part that carries the compression is termed a flange. However, the materials used have changed over the years but the basic structure, Yeah An is the same.

## 2. Lods acting on a Bridge

Various types of loads are considered for design of bridge structures. These loads and their load combinations decides the safety of the bridge construction during its use under all circumstances. Different design loads acting on bridges are explained

- 1. Dead load
- 2. Live load
- 3. Impact load
- 4. Wind load
- 5. Longitudinal forces

- Centrifugal forces
   Buoyancy effect
   Effect of water current
- 9. Thermal effects
- 10. Deformation and horizontal effects
- 11. Erection stresses
- 12. Seismic loads

### 2.1 Dead Load

The dead load is nothing but a self-weight of the bridge elements. The different elements of bridge are deck slab, wearing coat, railings, parapet, stiffeners and other utilities. It is the first design load to be calculated in the design of bridge.

## 2.2 Live Load

The live load on the bridge, is moving load on the bridge throughout its length. The moving loads are vehicles, Pedestrians etc. but it is difficult to select one vehicle or a group of vehicles to design a safe bridge.

So, IRC recommended some imaginary vehicles as live loads which will give safe results against the any type of vehicle moving on the bridge. The vehicle loadings are vehicle moving on the brings and they are dategorized in to three types and they are

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## Review On Design Optimization And Vibration Analysis Of Heavy Duty Leaf Spring By Using CAD Tool.

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<sup>2</sup>Vijay L. Bhambere, Head Of Department Of Mechanical Engineering Department, Jagadambha College of Engineering and Technology, Yavatmal, Maharashtra, India

Abstract: Leaf spring sets are mostly used in heavy duty vehicles to absorb shocks during running of vehicle. It is ost popular and widely used component in suspension system for heavy duty vehicles. It is nothing but a set of metal strips which are grouped together in ascending order with respect to length. A central holt is provided to hold all strips together.

It continuously works in worst conditions and absorbs shocks. Also it holds the entire weight of the vehicle. Hence the failure may accurse rapidly in leafs. To avoid failure periodic inspection and maintenance is carried out. There are several other reasons of failure which depends on particular situation.

In this paper, the available literature is studied well and their explanations are given briefly. Also from this ady the all possible troubleshoots and failure reasons are summarized. On the basis of this study outcomes were drawn.

Key Words: Lead spring set, leaf spring failure, periodic inspection

## 1. Introduction

Leaf springs are mainly used in suspension systems to absorb shock loads in automobiles like light motor vehicles, heavy duty trucks and in rail systems. It carries lateral loads, brake torque, driving torque in addition to shock absorbing. The advantage of leaf spring over helical spring is that the ends of the spring may be guided along a definite path as it deflects to act as a

structural member in addition to energy absorbing device. According to the studies made a material with maximum strength and minimum modulus of elasticity in the longitudinal direction is the most suitable material for a leaf spring. [1]

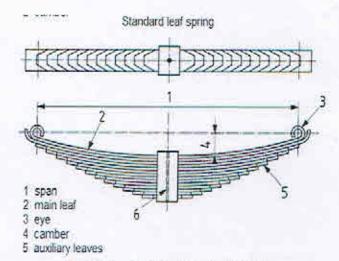


Fig. 1: Standard Leaf Spring Set. [2]

The advantages of the leaf spring are based on its simple construction, low costs and easy maintenance. The design also provides the solution for the axle support. Almost all vehicle suspension uses parabolic leaf springs. The difference between the normal leaf spring and the parabolic leaf spring is the total number of leafs. A parabolic leaf does not need of huge amount of leafs because the stress is distributed equally due to its parabolic shape.

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