Electrical power generation system using railway track pdf

What is railway track power generation?

Railway track power generation is a novel sort of energy source. This is done by repurposing the energy that would otherwise be squandered by moving cars. It transforms the kinetic energy generated by moving cars into electric energy. RPG could be a viable solution for both battery charging stations and street light lighting.

What equipment is used in railway track generating electricity?

The main equipment used as follows metal railway track, helical spring, rack and pinion mechanism, chain drive, flywheel, gears and DC generators. Railway track generating electricity is a system developed to generate electricity by the load applied by train on track. It converts mechanical energy into electrical energy.

How do railway tracks generate non-conventional energy?

The energy obtained from railway track is one source to generate non-conventional energy because there is no need of fuel to generate the output in the form of electrical power and this is done by using gear drive mechanism. These mechanism carries the flap,rack and pinion,freewheel,flywheel,DC generator,battery.

How energy can be tapped and used at a commonly used railway track?

This project to show how energy can be tapped and used at a commonly used railway track. In railway track, large amount of energy wasted during train are passing through the track due to the dissipation of heat and friction when trains are moving through track. Here we can use railway track as a power generation unit.

Why is railway track a provenance of non-conventional energy?

The energy gathered by the simple methodof railway track is one of the provenances to provide the non-conventional energy. As the technology is propelling the swallowing of power is firmly climbing. The cost of provision and the dispute of power generation plays valuable role in the country's appropriateness in the world economy.

What is a railway power harvesting system?

The main focus of this arrangement is the harvesting large amount of power from railway track which can be used to power the track side infrastructures which has power rating up 6 to 10 watts. The energy generated will be stored in the battery and also showing the output by glowing a set of 12 to 15 LEDs. 1. Introduction

power output without using electrical converter component . This type of continual power output can be smoothly utilized. We can harvest large amount of energy from rail-track and this power can be employed in order to operate railway side-track equipments which has power ratings of about 8 to 10 watts or more. To accomplish this goal, an

That is tremendously available energy in low intensity with ample quantity can be utilized. This machine

converts reciprocating motion in to rotary motion. The rotational power is stored in flywheel & flywheel rotate alternator that generate electricity. Railway track electricity generation as such is not a new concept.

The whole generation of energy can be directly used for various purposes without any much loss and the energy produced is pollution free. IV. CONCLUSIONS From this paper it can be studied that electrical energy is induced from the vibrations produced due to the running train on the track. The railway stations required plenty amount of energy ...

Fig. 1: Block Diagram of Generation of Power Using Railway Track 2. DISCIPTION OF HARDWARE 1. Railway Track arrangement A railroad or railway is a track where the vehicle travels over two parallel horizontal steel bars, called as rails. The rails support & direct the wheel of the vehicles, which are traditionally either train. 2. Rack and pinion

flywheel rotate alternator that generate electricity. Railway track electricity generation as such is not a new concept. There were many attempts in the past using pneumatics, electromechanical materials etc. but all of them proved very costly and were not practically feasible in day-to-day real life. 4. ARRANGMENT Fig. 2: Arrangement Of Component

Keywords: Power Generation, Railway Track, Dynamo I. INTRODUCTION ... turbine due to the wind caused by the moving train and also by using an electrical power generation system. The idea is to design a wind turbine that can be installed between the sleepers on a track, and as the train passes overhead, the wind drives a turbine to ...

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Fig.-1 Block Diagram of Generation of Power Using Railway Track 2.1 HARDWARE DESCRIPTION i) Railway Track arrangement A railroad or railway is a track where the vehicle travels over two parallel steel bars, called as rails. The rails support & guide the wheel of the vehicles, which are traditionally either train or trams.

Power generation using railway track system can be used in most of the places such as All highways road speed breaker All Railway track 6. Conclusion It is observed that the electrical power is in great demand, we as electrical engineer should be in discovered for new idea of power generation. As energy can never be created or destroyed, we should

Fig, Working Model of Power Generaton Railway Track Power Generation (RPG) is a system design to capture waste and kinetic energy from all vehicles. This device converts the kinetic energy of the vehicles into

electric energy. This is done by ...

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International Research Journal of Engineering and Technology (IRJET) e-ISSN: 2395 -0056 Volume: 04 Issue: 01 | Jan -2017 p-ISSN: 2395-0072 GENERATION OF POWER USING RAILWAY TRACK Saurabh D. Bhusate1, Prachi S. Chaware2, Prof. Ashvini B. Nagdewate3 DES"s College of Engineering & Technology Dhamangaon Rly, Amravati DES"s ...

6. 6 Introduction o In this project generating electrical power by running train on the railway track o Non-conventional energy using railway track needs no fuel input power to generate the output in the form of Electrical power o Using Faraday"s Law of Electromagnetism o The system carries train model, rail model, coils, charge controller, battery and inverter control o Its ...

1) The document proposes a system to generate power from railway tracks using a mechanical energy harvesting arrangement. As a train passes over the track, it causes vertical deflection which is harvested through a rack and pinion mechanism connected to a ...

Under the guidance of Prof A K Murthy EPCET, Dept Of ME, Bangalore Phone: 9902576902, Email-ananthak55@yahoo ABSTRACT: An electrical power generation system comprises a variable capacitor and a power source. The electrical power generation system is configured to generate electric power via movements of the rail.

This mechanism carries the rack, pinion, flaps, gears, freewheel, flywheel, DC generator, battery, etc. Rack & pinion, D.C generator, battery and inverter are used as control mechanism, so that we can implement this arrangement to all railway track system and the large power generation is obtained but this type of arrangement have high initial ...

power generation by railway track PPT - Download as a PDF or view online for free ... o Download as PPT, PDF ... We can used this system to supply electricity for railway station equipment like light,fan,signal light etc. This arrangement can be used in different application like in foot step or speed breaker at school, colleges and ...

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4. iv ABSTRACT In this project, we are generated power by energy harvesting arrangement simply running on the railway track for power applications. Today there is a need of Non-conventional energy system to our nation. The energy obtain from railway track is one source of to generate non conventional energy because there is no need of fuel as a input to generate ...

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