

Harvesting Kinetic Energy of Footsteps to Generate Electricity

**Shrushti Prakash Pande, Saloni Arvind Sangode, Pranay Ramu Lamture
Vrushank Sanjay Choudhary, Sarthak Gajanan Wankhde**

Students, Bachelor of Electrical Engineering

Yeshwantrao Chavan College of Engineering, Nagpur, Maharashtra, India

An Autonomous Institution Affiliated To Rashtarsant Tukadoji Maharaj Nagpur University

Abstract: *Energy and power are the basic needs of this modern world. The Energy demand is increasing every day. On the other hand, a lot of energy resources are depleted and wasted. Suggestion for using the waste energy of leg power with a person movement is very important in populated countries like India where are roads, railway stations, bus stands, temples etc. crowded with millions of people moving around. This unit energy is wasted. If this energy allowed its use will be a great invention. In this project we convert unconventional from a mere pedestrian step into electric energy. This project uses a simple drive mechanism such as rack and pinion assembly. The control mechanism carries rack and pinion and DC generator for output. In this project we generate electricity as an unconventional method simply by walking or running steps. A non-conventional energy system is very essential at this time to our nation. Unconventional energy using the foot step needs no fuel input to produce electricity Power supply. In this project, a simple drive mechanism such as a rack and pinion assembly and chain drive mechanism are used for the production of energy using the obtained power it converts to electric when walking up the stairs energy using mechanical L9 systems. Generated energy is stored using a battery and it is used for activation of connected loads. It is one of the compact and efficient systems for generating electricity that can be easily installed in many regions.*

Keywords: Footsteps, Conventional Energy, Non-conventional energy system, D.C. Generator, Rack & Pinion, Chain.

REFERANCES

- [1]. NicharasThanach-Issarasak Department of Instrumentation and Control Engineering School of Engineering King Mongkut's Institute of Technology Ladkrabang Bangkok, Thailand, 2021 International Conference on Power, Energy and Innovations (ICPEI 2021) October 20 -22, 2021, NakhonRatchasima, THAILAND
- [2]. SubhawattJayasvasti Department of Instrumentation and Control Engineering School of Engineering King Mongkut's Institute of Technology Ladkrabang Bangkok, Thailand, 2021 International Conference on Power, Energy and Innovations (ICPEI 2021) October 20 -22, 2021, NakhonRatchasima, THAILAND
- [3]. PhonexaiYingyong Department of Instrumentation and Control Engineering School of Engineering King Mongkut's Institute of Technology Ladkrabang Bangkok, Thailand, 2021 International Conference on Power, Energy and Innovations (ICPEI 2021) October 20 -22, 2021, NakhonRatchasima, THAILAND
- [4]. Don Isakson Department of Instrumentation and Control Engineering School of Engineering King Mongkut's Institute of Technology Ladkrabang Bangkok, Thailand, 2021 International Conference on Power, Energy and Innovations (ICPEI 2021) October 20 -22, 2021, NakhonRatchasima, THAILAND
- [5]. Thitinan Jonatan Department of Mechanical Engineering, Chulalongkorn University, Bangkok 10330, Thailand; Griselda Honchoing, Smart Mobility Research Unit, Chulalongkorn University, Bangkok 10300, Thailand, Surapong Swankier, Department of Electrical Engineering, Chulalongkorn University, Bangkok 10330, Thailand; Chanut U-wingchair, This paper is an extended and revised article presented at the International Conference on Sustainable Energy and Green Technology 2019 (SEGT 2019) on 11-14

December 2019 in Bangkok, Thailand; “Design of Kinetic-Energy Harvesting Floors” , 18 September 2020;
Accepted: 12 October 2020; Published: 16 October 2020