

Design and Fabrication of Electricity Generating Speed Breaker

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Abstract : Electricity harvesting speed bump (EHSB) is speed breaker of conventional shape, but the difference is that it is not fixed, rather it moves up and down, and electricity can be generated from its vibrating motion. This speed bump consists of an upper cover which will move up and down, a shaft mechanism which will be used to drive the generator and a rack and pinion mechanism which will connect the cover and shaft. There is a spring mechanism to return the cover to its initial state when a vehicle has passed over the bump. Produced energy in the past was up to 80 Watts. For this purpose, a clutch mechanism is used so that both the up-down movements of the cover can be used to drive the generator. Mechanical Motion Rectifier (MMR) mechanism ensures the conversion of both the linear motions into rotational motion which is used to drive the generator.

Keywords : electricity harvesting, generator, rack and pinion, stainless steel shaft

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