

ABSTRACT

The objective of this Project was to design a speed breaker mechanism to generate electricity for the street lights for urban roads. Since at night, street lights don't usually glow and therefore accidents occur. The mechanism of speed breaker is consisted of hydraulic cylinders, gear system, flywheel, DC Generator and battery. The use of Hydraulic cylinder for this mechanism of speed breaker has not been found. So, this project could be the stepping stone to utilize hydraulic cylinder.

With a comprehensive literature work, a model was designed to show the working of the idea. The model was made with the help of syringes (which replicates hydraulic cylinder), gears, DC Motor which are already available in market. All the components were fixed on a wooden board. This experiment helped us in making observation to make a prototype. The prototype was made to replicate the conditions of actual working conditions.

Through the analysis of experiment and data from prototype, the design of actual ground scale mechanism has been proposed based on the force applied by vehicle and electricity generated. The proposal of this project has been submitted to Islamic Development Bank.

It is envisaged that the ground scale model of this study would be helpful to implement this idea on urban streets, that may help in reducing accidents on Urban Roads. Moreover, this model is energy efficient and would result in comprehensive saving in fossil fuel.