

# 360 Degree Wheel Rotation Vehicle

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**Abstract** – Main function of car is to move from one place to another place. We find that every member of the family have their own vehicle. Car provides us lot of benefits like protect us from sun heat in summer and from rain in monsoon. Travelling is inevitable part of person's life Car is the most common thing in today's world. Having a car is the status in the society but Having a costly car is a royal status in the society, with increase in number of vehicle people have to face traffic problems like parking, taking reverse etc. So here we have“DESIGNED a 360 DEGREE ROTATING CAR” for these above mentioned purposes. These problems can be efficiently reduce and eliminated by the use of this application we use. It operates in a clockwise and anticlockwise direction A primary objective of the present invention is to provide a simple, stable, easy control, smaller space needed and a more concise movement of car To better understand the present invention, detailed descriptions shall be given with the accompany drawings.

**Keywords** – 360 degree, DC motor, Fleming's left hand rule.etc.

## I. INTRODUCTION

This design will provide better comfort and also saves the time of customers, that's why it is also the reliable for the customer. As it is also battery operated car thus no fuel is required. Hence it is economical to the environment. This will also reduce the cost of the car. The brief about this project and details of design, materials, its estimation et c. described in subsequent section. Most of the people use car in their daily life, But most of the time, they have to face the problems like parking, taking U-turns etc. An automotive manufacturer is a company that produces vehicles.

Example names of automotive manufacturers include BMW, Ford Motor Company, General Motors, Daimler-Chrysler, Honda, Isuzu, Saturn, Toyota, and KIA, among others. Several different types of vehicles are designed to meet consumer demands. Examples include: pickups The advanced new technology has led to various modifications in the automobile sector. Out of these, zero degree turning radius which is being analyzed in various vehicles e.g. hurricane jeep, JCB, Nano Pixel etc . The turning circle of a vehicle is the diameter described by the outside wheels when turning on full lock. There is no hard and fast formula to calculate the turning circle but it can be calculated using this;  $\text{Turning circle radius} = (\text{track}/2) + (\text{wheelbase}/\sin(\text{average steer angle}))$

## II. LITERATURE REVIEW

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Degree turning radius which is being analyzed in various vehicles e.g. hurricane jeep, JCB, Nano Pixel etc . The turning circle of a vehicle is the diameter described by the outside wheels when turning on full lock. There is no hard and fast formula to calculate the turning circle but it can be calculated using this;  $\text{Turning circle radius} = (\text{track}/2) + (\text{wheelbase}/\sin(\text{average steer angle}))$  presented zero turn four wheel steering system, the various functions of the steering wheel are, to control the angular motion the wheels, direction of motion of the vehicle, to provide directional stability of the vehicle while going straight ahead, to facilitate straight ahead condition of the vehicle after completing a turn, the road irregularities must be damped to the maximum possible extent. This project the use of steering is to rotate front wheels. Mr. Sharad P. Mali, presented zero turn four wheel mechanism, in this project people have used DC motor and wheel to vehicle rotate 360 degree at a same position. So in this project, the idea is to arrange of DC motor and wheel.

## III. EXPERIMENTAL PROCEDURE

### 1. Fabrication of Project

This project consist of steering, chain sprocket,DC motor, wheel, bearing, iron pipe, battery and chain drive. In this system first the vehicle is stopped and wheels are then turned in the required direction with help of steering system and DC motor. Teeth of sprocket are completely meshed with chain drive which has used to provide rotary motion to rear wheels by help of DC motor. Steering is used to provide direction of rotation to front wheels by help of sprocket and chain drive arrangement.

## 2. Steering

Steering is a part of 360 degree wheel rotation vehicle. This part is used to provide the direction to the front wheels by help sprocket and chain drive, which provides direction to the front wheels clockwise or anticlockwise direction.

## 3. Chassis

The chassis construction influences vehicle driving dynamics, comfort, safety, and road holding ability. This feature, extracted from just-auto's third edition survey of chassis engineering and systems, considers chassis systems definitions and current developments in the field. A chassis consists of an internal framework that supports a manmade object in its construction and use.

## 4. Gears-Motor

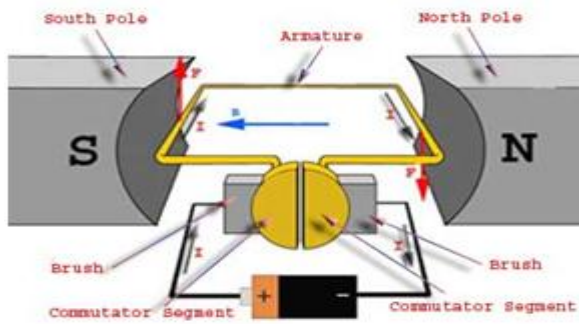


Fig.3.Electro-magnet dc motor.

The major problem is that agglomeration of nanoparticles may occur. When finely divided solid nanostructures are immersed in liquids, they often do not form a stable dispersion. Many of the particles aggregate together in forms of clumps. Though these particles can be easily re-dispersed in liquids by mechanical dispersion, they soon clump together again to form large aggregates that will settle out of the suspension quickly.

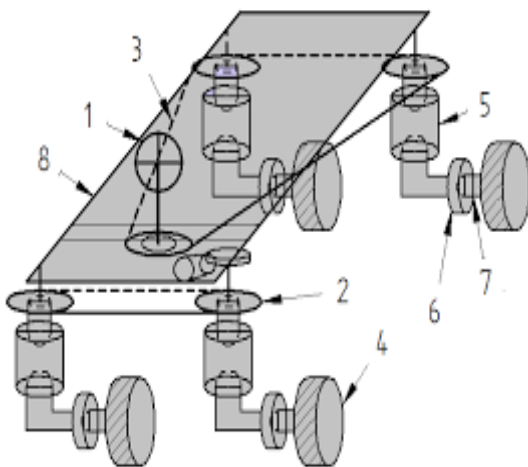


Fig.4. Chassis Design.

## 5. Applications

- It is used for moving material around the industry
- Movement in sharp and narrow areas
- It is used almost in all types of terrain

## IV. CONCLUSION

A prototype for the proposed approach was developed by introducing steering and servo motor to wheel rotate 360 degree. Thus it is concluded that vehicle can be allowed to guide vehicle in all direction. 360 degree of rotating automobiles and also we can guide in parallel direction.

In recent time the advancement is made in automobiles. So, it has been modified in such a way that it can save time and also easily work with many problem. This can give fast response and less space is required. The developed model is recommended for inclusion in the cars in various area such as small industries, railway platforms Thus we conclude that we can allowed vehicle to guide vehicle in all direction. 360 degree of rotating car.

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