

DESIGN AND FABRICATION OF THREE WHEEL ELECTRIC SCOOTER

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ABSTRACT

Today Global warming is big threat for our environment . So we are making an eco-friendly project. It has two very vital parts, the dc motor and the controller module. The dc motor is the one that drives the whole scooter fabrication while the controller is the mind, order the dc motor, lights, sensors, etc. The scooter is charged using a 24V rechargeable battery and can run in forward and backward directions .The project functioned according to hope is being for low cost and eco-friendly replacement as compared with its easily available in market the counterparts. It has vigilant a low cost-effective outlook to providing excel transport systems in a wide variety of petition. It is especially useful in inside use, within the vicinage of a school, university, shop-ping and the like. It is purporting for mono rider only.

Keywords: Electric Tri-Wheel Scooter,Transportation, Excel Transport system, Electric vehicles

I. INTRODUCTION

The historical backdrop of transport is to a great extent one of mechanical developments. Advance in innovation have permitted individuals to travel more distant, investigate a more area, and extend their impact over bigger and bigger regions. Indeed, even in old occasions, new apparatuses, for example, foot covers, skis, and snowshoes stretched the separations that could be voyage. As new innovations and revelations were applied to move issues, travel time diminished while the capacity to move more and bigger burdens expanded. Advancement proceeds with today, and transport analysts are attempting to discover better approaches to lessen expenses and increment transport effectiveness. In electric bike the power is put away ready in a battery-powered battery, which drives electric engine. Electric bike and cruisers need next to no upkeep. The primary bit of leeway of this electric bike is lessen clamor contamination and air contamination.

II. OBJECTIVE

To Design and Fabrication of Three Wheel e-Scooter for reduce air pollution.

III. NOVELTY

- Power Transmit will be in rear wheel.
- Two brakes will be use in front and Rear Wheels.

IV. DESIGN WORK

4.1 Chassis size: -The chassis of the vehicle is made iron rectangular section of 21.5*42.5 inches dimension.

4.2 Motor specification: - The dc motor

Motor Type : 42mm,

Max. Torque :150kg.cm @ 360 rpm

4.3 Wheel Size:- 28*2 inch

DC MOTOR

The inverter is gadget which can changes over the electrical DC power in to single or three stage AC power; this machine is helpful in Renewable vitality frameworks and airplane radar framework. The point of this exploration is to examine the capacity of utilizing the revolving inverter which is electrical DC engine and alternator electrical generator as one framework, by associating each other with one shaft, by controlling the rotational speed of the

couple to get helpful gadget that can changes over the DC sun oriented boards vitality into AC 220 volts 50 Hz electrical force. This framework can be utilized for household application with satisfactory proficiency rather than the utilization of static electronic inverter. The cruel high temperature states of Iraqi summer days, at which the temperature is more than 50Co, make crafted by the electronic force inverter is inconceivable. Along these lines the activity of the DC engine and AC generator was concentrated hypothetically and for all intents and purposes by build a 5 kW rotational electrical inverter, which ready to change over 5kW DC 220V sun based vitality to 220V 50 Hz. The developed rotational inverter was effective accomplished with an all out proficiency about 80% at full burden. The household application gadget was accomplished with minimal effort contrasted with electronic inverter and it can work a high temperature more than 90CO, works easily with adequate proficiency.

CONTROLLER

Control structures have basic effects on converter-interfaced appropriated ages (DG) under lopsided conditions. A large portion of past works center around smothering dynamic force motions and waves of DC transport voltage. In this paper, the connection between amplitudes of the dynamic force motions and the receptive force motions are right off the bat derived and the various leveled control of DG is proposed to diminish power motions. The progressive control comprises of essential and optional levels. Current references are produced in essential control level and the dynamic force motions can be stifled by a double present controller. Auxiliary control lessens the dynamic force and responsive force motions at the same time by ideal model focusing on least amplitudes of motions. Recreation results show that the proposed auxiliary control with less infusing negative-succession current than customary control the proposed auxiliary control with less infusing negative-succession current than customary control techniques can adequately restrict both dynamic force and responsive force motions.

CHARGE INDICATOR

The object of this paper is to explore the circuit topologies and control procedures for quick charging of battery for the electric vehicle (EV). Investigation and examination of quick charging attributes for various charging controls are introduced. A charging and releasing checking framework was actualized dependent on a DSP. To improve the usage of EV, it is important to plan a charger with the capacity of quick charging and the ability of charging control, consequently to draw out the battery life. The charging attributes (charging time, charging current, temperature, exchanging recurrence, and heartbeat time) of various charging techniques (two-advance, heartbeat, and Reflex) are investigated and introduced. Trials were completed dependent on the battery set of four 26 Ah lead-corrosive batteries in arrangement. A LabVIEW-based observing framework was developed to record the voltage, current and temperature for the batteries. The DSP-based accusing control consolidated of the screen framework includes quick charging, advanced and flexible control.

BATTERY CHARGER

So as to help various kinds of battery-powered batteries (for example Li-Ion, Lead-Acid, NiMh), the plan of all inclusive battery chargers must concentrate on wide change proficiency rather than customary pinnacle effectiveness structure. Wide effectiveness is the capacity to keep up superior inside the ostensible yield power while supporting the charging cycle voltage of various battery innovations. The target of this paper is to handle this new wide effectiveness specialized test and give a structure approach that centers around numerous working focuses instead of getting top proficiency at one working point. The general battery charger is relied upon to give a requesting yield voltage go among ostensible and 1.5 occasions ostensible and supporting most extreme force conveyance with high effectiveness.

ACCELERATOR

It is used for speed up/down the vehicle. It is connected to the Controller.

ON/OFF SWITCH

It is used to start the vehicle.

V. FUTURE SCOPE

By increasing the battery power and motor power. We can gain the mileage .The increasing the quality of material we can increase safety factor.

VI. CONCLUSION

This perusal vector to design and fabricate a model three wheeled battery electric scooter of utter compact to be used in several petition. An electrical three wheeler scooter propelled brushed electric motor , using electrical energy picked in lithium-ion battery . Electric motor give instant torque . It has huge profitable low weight ,stiff frame , energy efficient . Three wheeled electric scooter has suitable fixture . It also produces zero emissions hence reduce the health hazards and environmental pollution also reduces the global warming.

VII. REFERENCES

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