iJRASET
International Journal For Research in Applied Science and Engineering Technology

INTERNATIONAL JOURNAL FOR RESEARCH

IN APPLIED SCIENCE & ENGINEERING TECHNOLOGY

Volume: 9 **Issue:** X **Month of publication:** October 2021

DOI: https://doi.org/10.22214/ijraset.2021.38223

www.ijraset.com

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International Journal for Research in Applied Science & Engineering Technology (IJRASET)
ISSN: 2321-9653; IC Value: 45.98; SJ Impact Factor: 7.429
Volume 9 Issue X Oct 2021- Available at www.ijraset.com

Fabrication of Electric Treadmill Bike

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Abstract: ***Electric Treadmill bike is a upgrading way of moving. With the help of Treadmill Bike, one can feel walk is not like a exercise it is like a person playing with a device which makes a person not soo tired. Now a days people are spending time on exercise than spending time for happiness. Electric treadmill Bike makes the person exercise along with having fun with the mate. There is already treadmill bicycle in the market which runs with all the human effort which makes the user very tired and exhausted. Electrifying the bicycle and and the accelerator, light etc… made the Electric Treadmill bike more attractive. This Electric bike is pollution free and will be the most entertaining and healthy thing especially on weekends and holidays.***
Keywords: Electric Treadmill Bike, Treadmill Bike, Electric Bike, Fabrication.

I. INTRODUCTION

The Electric treadmill Bike is not only a exercising treadmill as it make us to feel happy and enthusiastic to ride. Exercise are advised for health promotion, and prophylaxis for many cardiovascular diseases and also for rehabilitation after an episode of disease. Among the exercises aerobic exercises are applicable for these purposes. To do aerobic exercise many methods are usable for example: running, jogging, walking, cycling and others. Among different modes of exercises in the modern busy life, the cycling and treadmill exercises are the common to perform as indoor aerobic exercises. In motor driven treadmill exercise which is similarly to walking or jogging or running depends upon the speed of the treadmill motor is becoming more familiar to all. Thus we made an innovation to revenue that treadmill in park. This is nothing but having a walk in a park. The electric bike market varies incredibly by product type and regional demand. The placement of electric motors for e-bike is also receiving increased consideration. E-bike can have motors in one of three locations: the front wheel hub, mid-mounted at the bottom bracket (pedals), or the rear wheel hub. The rear wheel hub is the more popular location, and most of the large Chinese market is utilizing rear hub motors. Rear wheel hubs are thought to be best for throttle-controlled bikes, whereas the other locations work well with e-bike that only provide electric power when the pedals are being used (pedal assistance). The mid-mount motor is the fastest growing segment, in part due to strong competitors like Panasonic and relatively new competitors including Bosch and AEG

II. PROJECT AIM

A. Now a days Many people are using th automobiles which uses the fules. We need to reduce the pollution to very minimum level.
B. In manual treadmill the motion of the treadmill is rugged to overcome this we use a motor to rotate the rotors.
C. Electrifying the treadmill bike by adding the accelerator, lights etc…

To improve all above phenomenon we take initiative by designing something new which would help to reduce these harmful phenomenons

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III. COMPONENTS

A. Tread Belt

Tread belt comes in one-ply and two-ply options. One-ply tread belts are basically the low-cost option, needing replacement over time whereas two-ply tread belts are thicker and last much longer. Some tread belts overcome with cushioning and impact absorption which is highly recommended for your joints and comfort level. People with muscles or joint problems users are advised to opt for a more cushioned running surface. Tread belts having solid surface may be used but cushioned docks are highly recommended. This is an most important feature as it will help to make impact less jarring to your joints. Many treadmills can cushion up to 24% of the impact, with 14-16% being the average.

B. Motor

While many people just analyze the horsepower of the motor, actually look at the type of motor in addition to the horsepower. Basic treadmill motor are usable with 2.5hp (horsepower) and 1440 rpm. It is not suitable for driving on roads due to traffic problem. More it will leads to accidents so for the electric treadmill bike we use a common traction motor with 3000 rpm. With this much of speed the cycle can be drive freely

C. Electric Bike Battery

Electric bike batteries typically come in 12V, 24V, 36V, 48V and 72V batteries. Here is another analogy: electricity is water. If it is water flowing over the wires (tubes), then higher voltage means that the water (energy) moves faster, and over a smaller tubes typical battery is 36V on most E-Bikes with some are 24V and some are 48V. the electric bike manufactures spec these because they produce a good power to cost ratio.

IV. FABRICATION

Electric Thredmill Bike is fabricated using Various Manufacturing Operations like Welding, Bending, Cutting, Grinding, Drilling Etc…

FIG: Front view of Electric Treadmill Bike

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FIG: Front view of Electric Treadmill Bike

Firstly the Frame was Fabricated using cast iron bars and rollers. The seat, Tyres, motor, chain system etc was arranged back side of the tread arrangement on the rollers along with front Tyre and handle was arranged at the front side of the vehicle. Later the connecting the motor to the battery, accelerator Etc…

V. CONCLUSIONS

Electric treadmill Bike was fabricated by performing different machining operations and finally electrified the mechanical Treadmill bike with all required materials. The electric treadmill bike is more efficient and environment friendl

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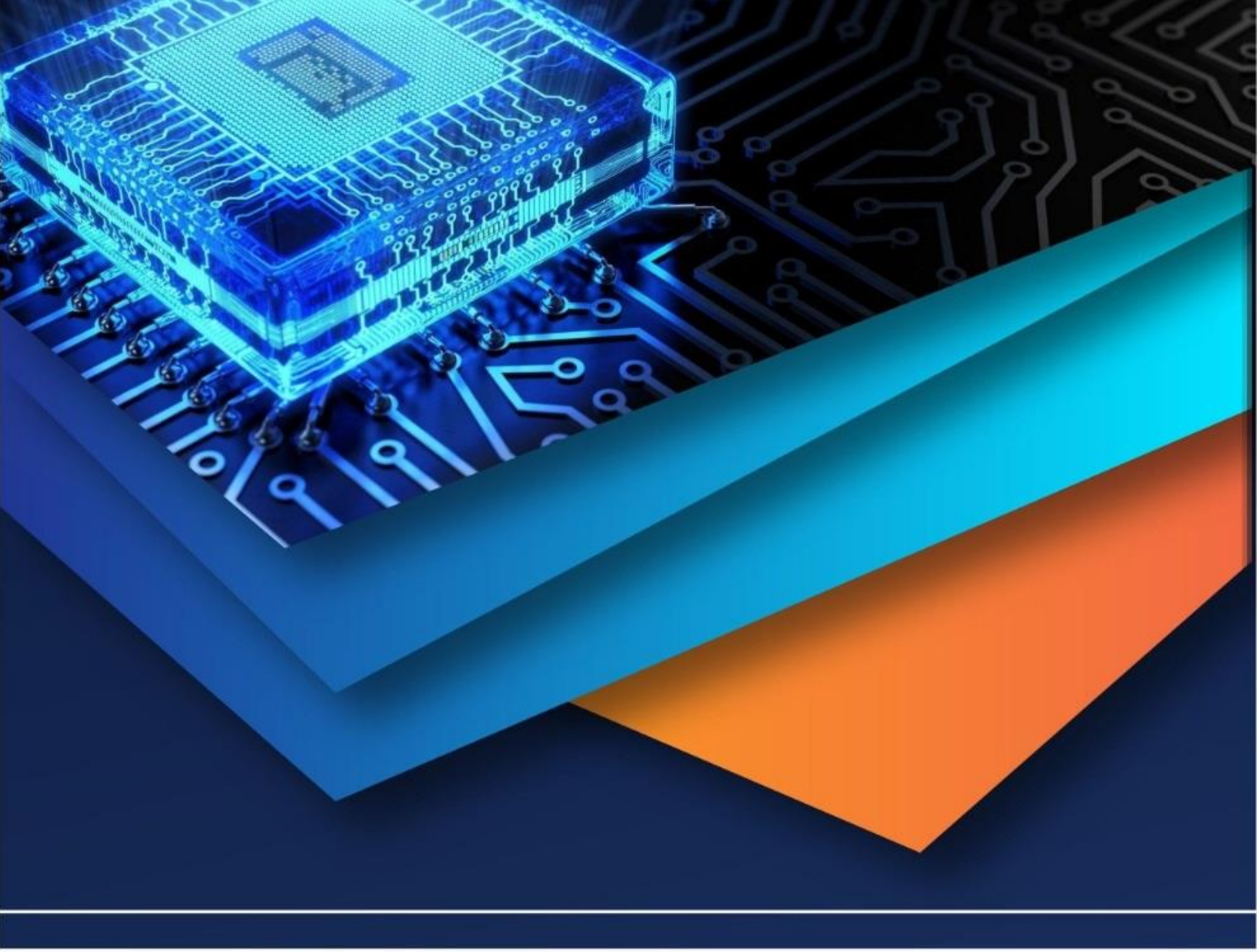

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