

Compressed air engine

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Abstract

A compressed-air vehicle is powered by an air engine Using compressed air, which is stored in a tank. Rather of mixing fuel with air and burning it in the engine to drive pistons with hot expanding gas, compressed air vehicles (CAV) use the development of compressed air to drive their pistons. Compressed air has been used since the nineteenth century to power mine rail engine and gondola in cities such as Paris (by a central, city-level, compressed air energy expansion system), and previously the basis of naval torpedo propulsion.

In 1863, Jules Verne wrote a novel called Paris in the twentieth Century about a world of glass huge buildings, high-speed locomotive, and air-powered automobiles.

In 1903, the Liquid Air Company located in London build a no. of compressed air and liquored air cars. The big problem with these cars and all compressed air cars is the less of twisting force produced by the 'engines' and the rate of compressing the air.

Keywords: twisting, compressed, stored, torpedo

Introduction

A compressed-air vehicle is powered by an air engine, which using compressed air, that is stored in a tank block. rather of mixing fuel with air and burning it in the engine to drive pistons with hot gas, compressed air vehicles. use the development of compressed air to drive their pistons. One build claims to have creat an engine that is ninety percent productive. Compressed air thrust may also be assimilated in hybrid system, e.g., accumulator electric thrust and fuel tanks to recharge the accumulator. This kind of system is called hybrid-pneumatic electric thrust. supplementary, remunerative braking can also be used in conjunction along the system.

Methodologies and Technology

One can buy the vehicle with the engine or buy an engine to be installed in the vehicle. often air engines are use one or more expounder pistons. In some uses it is profitable to heat the air, or the engine, to rise the range or capacity.

Our Working Design

Step-1 We arrange two crank shafts two-wheeler scooter.

Step-2 We fix two ball bearings on both side of crankshaft as shown in above diagram.

Step-3 We fix crank shaft on iron stand for smooth working.

Step-4 We adjoin both crank shafts with the distance angle of 90 degree for smooth turning.

Step-5 We fix crank shaft on wooden frame.

Step-6 We weld 2- crankshaft & connect pneumatic cylinder along them & predicament them on cabinet along the use of bearings. Weld 1- sprocket on the right-hand side of crank shaft to transmit its rotation to gear box.

Step-7 Now we connect 4 solenoid coil with pneumatic cylinder for provide 4 stroke (every coil provide 90 degree rotation when current pass through them).

Step-8 We connect 1:4 gear box with crankshaft for convert crank speed in to wheel torque motion, due to this our project is easily move on surface.

Step-9 The most important part of the project is power transmission system. As above instruction we are using four solenoid coil in our project & these coils are act as four stock transmittal, we are using a uncomplicated method to transmit the same power. We take 1-circular wooden block and partition of that circle in to 4-parts, these for piece are metallic frame.

Step-10 Now we take one special dc gear motor (motor shaft is not directly connected with motor, so we are transmit alternative current to the coil from that crank shaft) & predicament it with round dick & the motor transfer alternative current supply to coil.

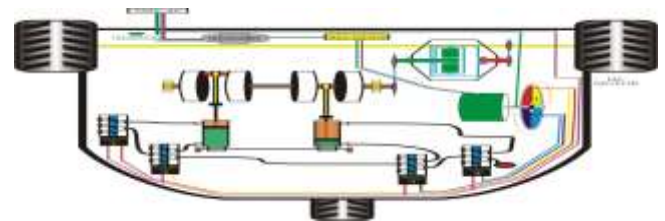


Fig 1: Final look

Applications

Mopeds

Jem Stansfield, an English inventor has been able to convert a regular scooter to a compressed air moped^[10]. This has been done by equipping the scooter with a compressed air engine and air tank.

Cars

Few firms are inspecting & developing clones.

Buses

MDI makes Multi CATs automobile that can be used as buses or trucks. RATP has earlier developed an enthusiasm in the compressed-air pollution-free bus.

Locomotives

Compressed air train engine have been historically used as mining train engines.

Gondola (TRAMS)

Different compressed-air-powered gondola were used, earlier in 1876.

Watercraft and aircraft

Right now, no water or air transports exist that generate utilize of the air engine. In an old era compressed air engines thrust certain torpedoes.

Advantages

- Air, on its own, is inflammable.
- More twisting force for low quantity.
- The mechanical structure of the engine is easy & vigorous.
- Low production and uphold costs as well as easy control.
- Compressed-air container can be get rid of or regenerate with minimum pollution than accumulator.

Conclusion

Compressed-air transports are comparable in many ways to electric vehicles, but use compressed air to store the energy instead of accumulators. Their dormant benefits over other transports include. Much like electrical transports, air powered transports would basically be powered through the electric broom. Which makes it simpler to target on decreasing pollution from 1- origin, as clashing to so many of transports on the track. Excreting of the propellant would't be required due to transfer power off the electric broom. This presents remarkable price satisfaction. Pollution created during propellant transportation would be remove.

References

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2. YouTube
3. Recently few firms have started to manufacture compressed air cars, while none have been liberated to the public, or have been trialled by third parties.