WATER FUEL FOR VEHICLES

ALTERNATIVE FUELS

PETROL REPLACED BY WATER IN BIKES OR SCOOTERS

INTRODUCTION:

- The necessity of an alternative fuel is increasing day by day due to pollution of environment.
- Here we are going to use water as a fuel for a vehicle.
- The usage of water as fuel is eco friendly and is economical.

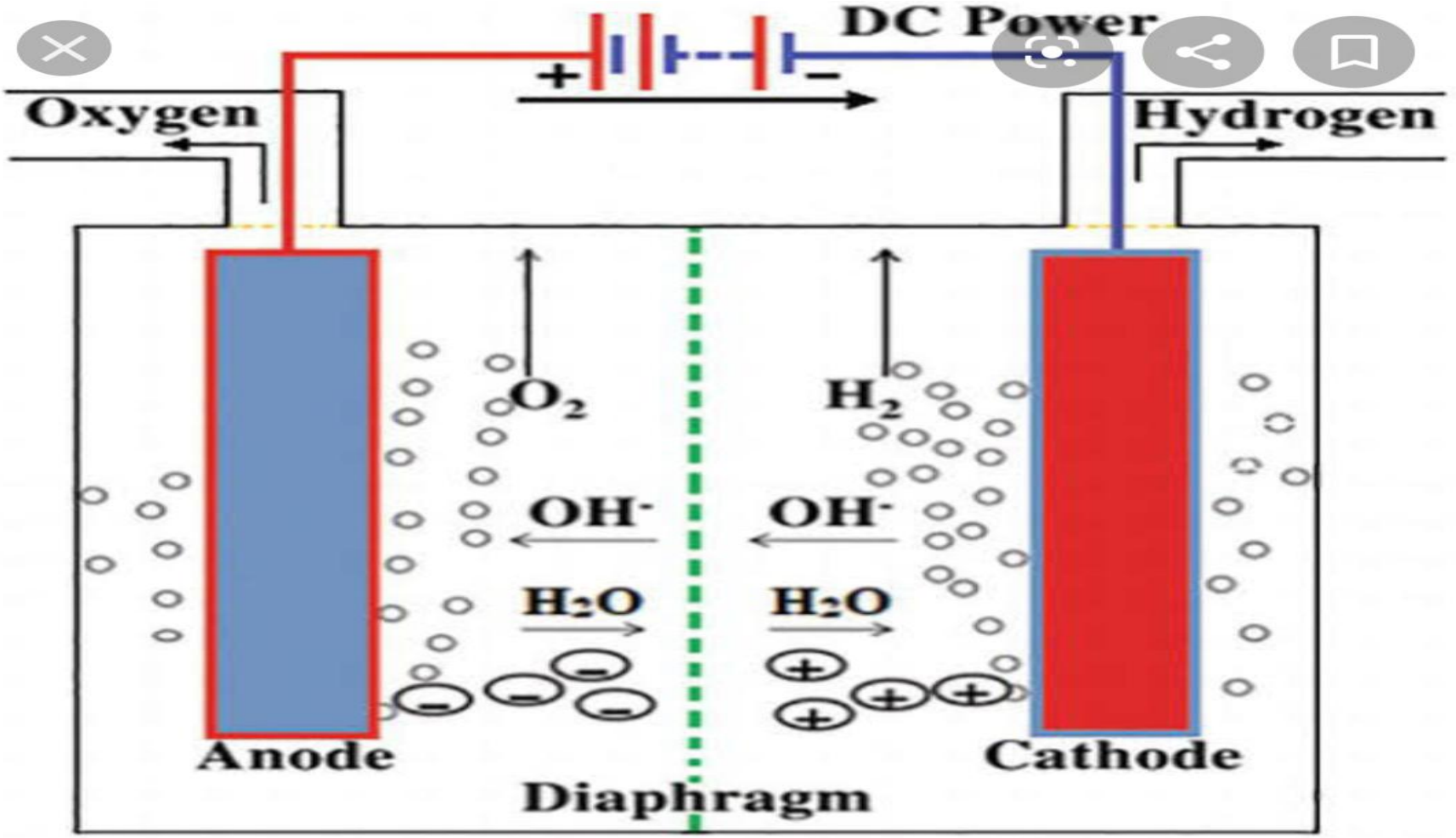
EQUIPMENTS:

- 12volts DC Battery.
- Anode and cathode made up of iron or steel.
- Fuel tank with polymer electrolyte membrane.
- Bike or Scooter with 4 stroke engine.

PHENOMENON INVOLVED:

- The phenomenon involved in the separation of hydrogen and oxygen in water is

  "ELECTROLYSIS OF WATER"
- In electrolysis the anode is connected to the positive terminal of the battery and the cathode is connected to the negative terminal in water.
- When the current is passed the oxygen reacts with anode and the hydrogen reacts with cathode with the help of polymer electrolyte membrane.



- Thus the hydrogen and oxygen liberates from the water.
- The liberated hydrogen is used for combustion in the engine.

PROCEDURE:

SPLITTING OF WATER:

- At first fuel tank is placed at the top of the engine with anode and cathode connections of the battery into the tank.
- When the battery circuit is closed ,the electricity passes into the water ,thereby the splitting of oxygen and hydrogen takes place and the hydrogen liberates from the water and the oxygen is let out.

- The liberated hydrogen is collected separately by a tube from the fuel tank.(To check whether it is hydrogen or not, introduce the tube which carries the hydrogen gas into a container with soap water. In the soap water ,there is formation of bubbles. Keep a flame near a bubble, the fire starts to sparkle due to the hydrogen)

PATH WAY OF THE FUEL:

CARBURETTOR:

- The tube which carries the hydrogen is inserted into **CARBURETTOR .** The carburettor mixes hydrogen with the air.

ENGINE:

Generally a four-stroke engine is an internal combustion engine that utilizes four different engine strokes,

(1)INTAKE /SUCTION (2) COMPRESSION (3) POWER (4) EXHAUST

- **INTAKE:**

In **'intake'** when the spark plug ignites, combustion takes place and thereby the piston starts to work and it pumps the air and the fuel mixture (the engine starts).

- **COMPRESSION:**

  In 'compression' the air and fuel mixture is kept at more pressure to produce more power.

- **POWER:**

  In 'power the rotational force of the engine is transmitted to the wheel.

- Thus the vehicle starts to move.

  This is how the engine starts to work with **water as a fuel** .

BY AKASH.C

GRADE 10