

## Smart Carburetor

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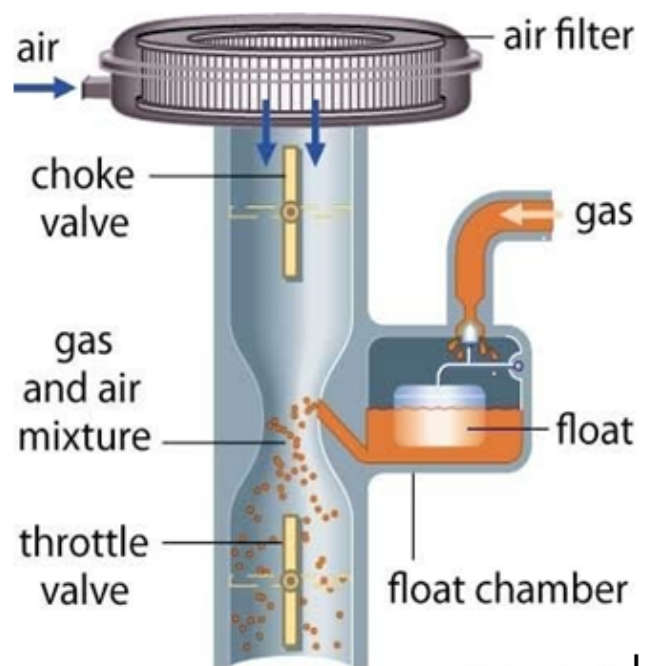
### ABSTRACT

Now a day's automobiles and vehicles are very important parts or need of human beings because they save our time and cover a lot of distance in very short time. When we talking about their mechanical structures and designing of them then we found a part name as carburetor which is very important parts of vehicles which works as At the top, there's a valve called the choke that regulates how much air can flow in. If the choke is closed, less air flows down through the pipe and the venturi sucks in more fuel, so the engine gets a fuel-rich mixture. So due to its structure and designing nature it's not so good in working manner it's consume more amount of fuel and not provide needed amount of shaft power as  $P = (2NT)/60$  (in Kw) so I found a new concept which replaced this one by its working nature and convert all fuel into its useful energy, and provide more amount of shaft power which is very necessary or useful for our vehicles and automobiles and also convert all amount of fuel into its homogeneous form of mixture so its all fuel gets burn and provide energy by using a nonmaterial's membrane so all fuel gets homogenized [1].

### BASIC OF SIMPLE CARBURETOR (OLD TECHNOLOGY)

The carburetor has two swiveling valves above and below the venturi. At the top, there's a valve called the choke that regulates how much air can flow in. If the choke is closed, less air flows down through the pipe and the venturi sucks in more fuel, so the engine gets a fuel-rich mixture.

Figure 1: Basic principle of carburetor.



Basic nomenclature in carburetor:-

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- 1. Carburetion.
- 2. Choke valve
- 3. Air filter
- 4. Throttle valve
- 5. Float
- 6. Fuel

### Disadvantages of carburettor

- More fuels are consumed since carburettors are heavier than fuel injectors.
- Easily corrosion by air and liquid contact.
- Maintenance costs of carburettor is higher.
- It gives the proper mixture at only one engine speed and load.
- At a very low speed, the mixture supplied by a carburettor is so weak that it will not ignite properly.

### Smart carburetor ( Replace Technology on the place of simple/Existing carburetor)

- Principle-pressure difference
- Hollow Cylinder
- Outer(hard) Membrane(m1)
- Inner(soft) membrane(m2)
- Float
- Fuel leakage seals
- P1-fuel pressure
- P2=air pressure
- V=velocity of air Choke valve
- Throttle Valve
- Choke valve

Figure 2:- How a new design carburetor is work.

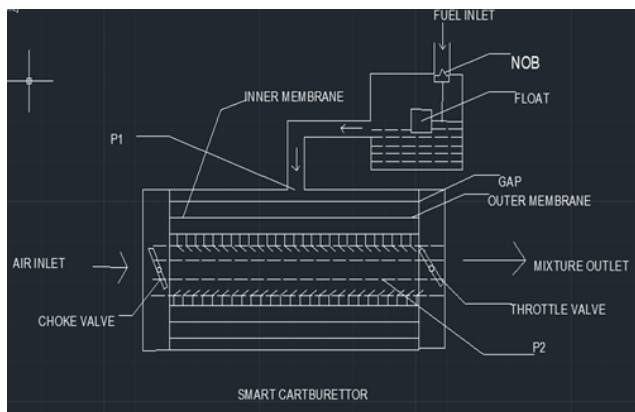
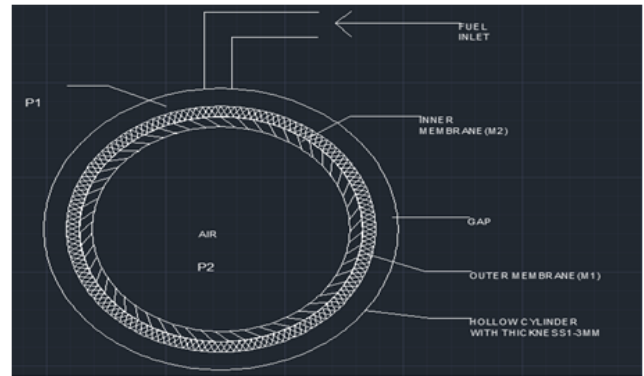


Figure 2: How I set there set of layer which is play important roll on this research.



### Proposed figure of New Technology

Working: Volatility-property of fuel to evaporate easily under normal temperature.

- As  $p_1 < p_2$  fuel will not pass through membrane m1
- If  $p_1 > p_2$  then fuel will easily pass from membrane m1 to m2 easily with variation of pressure difference and evaporate [2-5].

### Advantages

- Make a homogeneous mixture
- Will be more efficient
- Weight may be less as compare to simple carburettor
- Size, construction and working will much different as compare to simple carburetor.
- Working is more simple than simple carburettor.
- The fuel will easily evaporate due to homogeneous mix.of its.

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