



SNS COLLEGE OF TECHNOLOGY

(An Autonomous Institution)

Coimbatore-641035



Compressed Natural Gas (CNG)

CNG is natural gas compressed to a high pressure of about 1000 atmospheres.

It is derived from natural gas and the main constituent of CNG is methane.

The average composition of CNG is as follows:

Constituents	Percentage %
Methane	88.5
Ethane	5.5
Propane	3.7
Butane	1.8
Pentane	0.5

Properties

- (i) CNG is comparatively much less pollution causing fuel as it produces less CO, ozone and hydrocarbons during combustion.
- (ii) During its combustion, no sulphur and nitrogen gases are evolved.
- (iii) No carbon particles are ejected during combustion.
- (iv) It is less expensive than petrol and diesel.
- (v) The ignition temperature of CNG is 550
- (vi) CNG is a better fuel than petrol/diesel for automobiles.
- (vii) CNG requires more air for ignition.

Uses

As CNG is the cheapest, cleanest and least environmentally impacting alternative fuel. In Delhi, it is mandatory for all buses, taxis and auto to use CNG as a fuel.





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Liquefied Petroleum Gas (LPG)

LPG is obtained as a by-product during the fractional distillation of petroleum or from natural gas.

- ❖ LPG is obtained during the fractional distillation of crude oil
- ❖ It can be stored and transported easily in cylinders
- ❖ The average composition of LPG is as follows:

Constituents	Percentage %
n-Butane	38.5
Iso Butane	36.7
Propane	24.7
Others	0.1

- ❖ Its calorific value is 27800 kcal. / m³

Properties

- ❖ LPG is easily controllable
- ❖ It is readily liquefied under moderate pressure
- ❖ As a liquid, it looks a lot like water.
- ❖ It is colourless and odourless in its natural state
- ❖ LPG at atmospheric temperature and pressure is a gas which is 1.5 to 2.0 times heavier than air

Uses

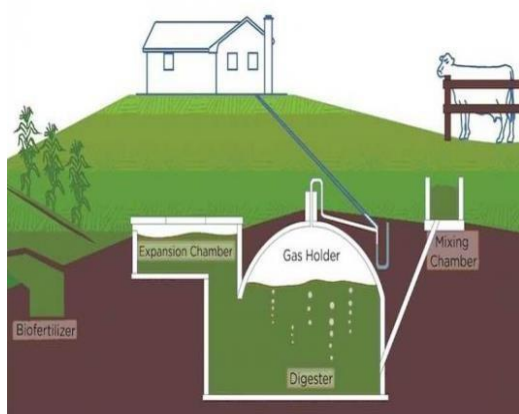
- ❖ It is used as domestic and industrial fuel.
- ❖ It is also used as motor fuel.
- ❖ LPG is also used as a fuel in internal combustion engine





Bio Gas

- ❖ Biogas is a type of biofuel that is naturally produced from the decomposition of organic waste in the absence of oxygen
- ❖ When organic matter, such as food scraps and animal waste, break down in an anaerobic environment (an environment absent of oxygen) they release a blend of gases called biogas.
- ❖ it is a renewable energy source



Properties

- ❖ It is about 20% lighter than air (Density is about 1.2mgs/Liter)
- ❖ Ignition Temperature is about 650-750°C
- ❖ Calorific value is 5000 kcal./m³
- ❖ Clean fuel
- ❖ No residue and smoke produced
- ❖ Non polluting & Economical

Uses

- ❖ Domestic fuel
- ❖ For street lighting
- ❖ For generation of electricity
- ❖ If compressed, it can replace compressed natural gas for use in vehicles



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