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Fuel and Combustion

1 What are the advantages and disadvantages of Gaseous fuels over soild and liquid fuels?

=> Advantages of Gaseous Fuels.

1 Gaseous fuels burn without any smoke.

2. They are clean in use.

3. Gaseous fuels do not require any special burners.

4. They burn without heat loss due to convection currents.

5. They have high calorific value.

6. They can also be used in IC Engine Fuels.

7. They are ashless.

8. They are free form solid and liquid impurities.

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=> Disadvantages of Gaseous Fuel

1. In Gaseous Feuel use very large storage tank.
2. They are most costly as compared with solid and liquid fuels.
3. They are highly inflammable.
4. In Gaseous Fuel use tank weight of is very high.

2. What are liquefied gases?

Liquefied gase is converted to the liquid phase by cooling or compression.

Ex. LPG, LNG, Liquid Oxygen and liquid ammonia etc.

This are the form of liquefied gases.

=> Explain the role of LPG.

LPG is a form of liquefied gases.

LPG Full form is Liquefied Petroleum Gas.

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LPG is non-toxic, non-corrosive in nature.

LPG is burns cleanly and has high octane rating.

LPG engines have to less vibraction.

LPG is a flammable mixture of hydrocarbon gases.

=> Explain the role of LNG

LNG is a known as natural gas.

LNG Gas is very cheaper.

LNG is a colourless and odourless liquid fuel.

LNG is a better than other fossil fuel.

LNG can not ignite when stored in its liquid form.

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3 Explain the meaning of HCV and LCV of a fuel.

=> HCV:

HCV Fuel has higher calorific value.

HCV is also known as HHV.

HCV is also known as Gross Calorific Value.

HCV is measurements in MJ/kg for solid fuel.

HCV is the amount of heat liberated from the combustion of a particular fuel.

It's By products are allowed to condense.

HHV fuel has higher heating value.

=> LCV:

LCV Fuel has lower calorific value.

LCV is also known as LHV.

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LCV is also known as the Net calorific value.

LCV is measurements in MJ/kg for solid fuel.

LCV fuel has Lower heating value.

LCV is the amount of heat liberated from the combustion of a particular fuel.

It's allowed to products freely escape from the system.