

MSE-402

Liquid Fuels

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LIQUID FUELS:

The liquid fuels can be classified as follows:

1. Natural or crude oil, and
2. Artificial or manufactured oils

Liquid fuels derived from petroleum:

- + Oils from distillation of petroleum
- + Coal tar
- + Shale-oil
- + Alcohols, etc.

The advantages and disadvantages of liquid fuels:

Advantages:

1. They possess higher calorific value per unit mass than solid fuels.
2. They burn without dust, ash, clinkers, etc.

3. Their firing is easier and also fire can be extinguished easily by stopping liquid fuel supply.
4. They are easy to transport through pipes.
5. They can be stored indefinitely without any loss.
6. They are clean in use and economic to handle.
7. Loss of heat in chimney is very low due to greater cleanliness.
8. They require less excess air for complete combustion.
9. They require less furnace space for combustion.

Disadvantages:

1. The cost of liquid fuel is relatively much higher as compared to solid fuel.
2. Costly special storage tanks are required for storing liquid fuels.
3. There is a greater risk of fire hazards, particularly, in case of highly inflammable and volatile liquid fuels.
4. They give bad odour.
5. For efficient burning of liquid fuels, specially constructed burners and spraying apparatus are required.