

## Plastic Production:

Most modern plastics are derived from natural materials such as oil, coal and natural gas with crude oil remaining the most important raw material for their production. The starting point for the production process is the distillation, in petrochemical refineries, of the raw material into fractions (different parts).

The heavy fractions give us lubrication oils and the heavy oils used for heating fuels. The lighter fractions give us gas, petrol, paraffin and naphtha. The chemical building blocks for making plastics come mainly from naphtha.

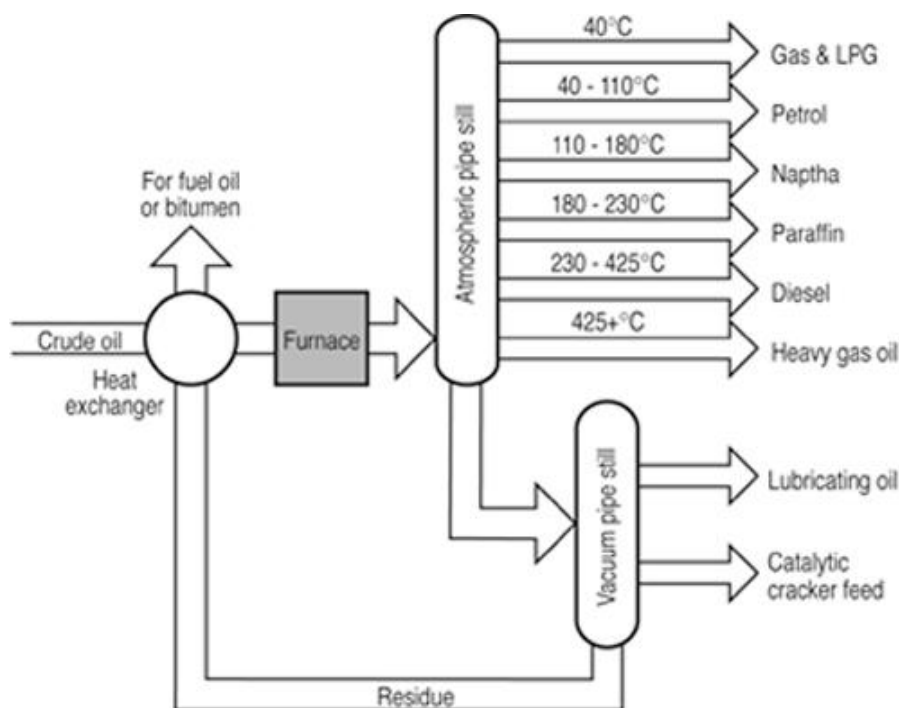


Figure: Distillation from crude oil.

The start of making plastics is to subject naphtha to a cracking process in which complex organic chemical compounds are separated into smaller molecules, dependent on their molecular weight. These smaller molecules include ethylene, propylene, butene and other hydrocarbons. The compounds produced through the cracking process are then further refined to produce the base plastic materials.

# TCE ENVIS - Plastic Waste Management

Thiagarajar College of Engineering, Environmental Information System

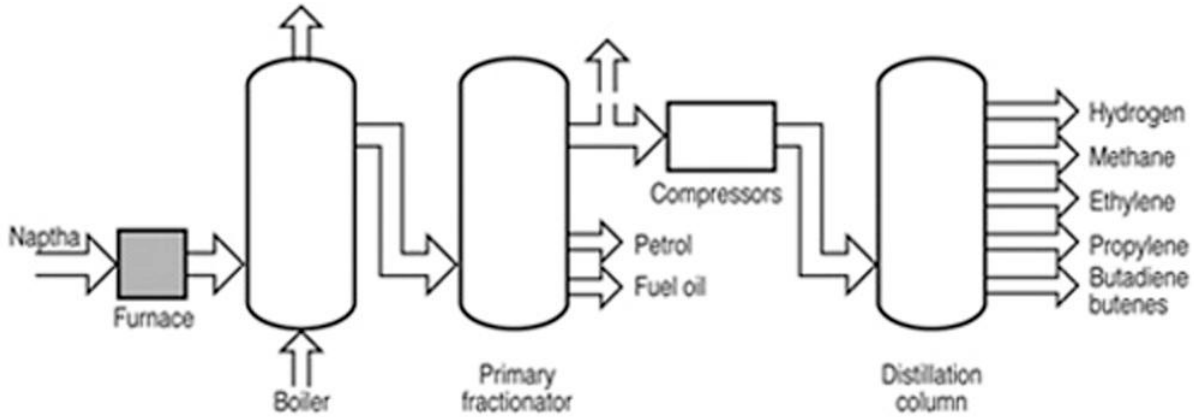


Figure. Cracking naphtha..