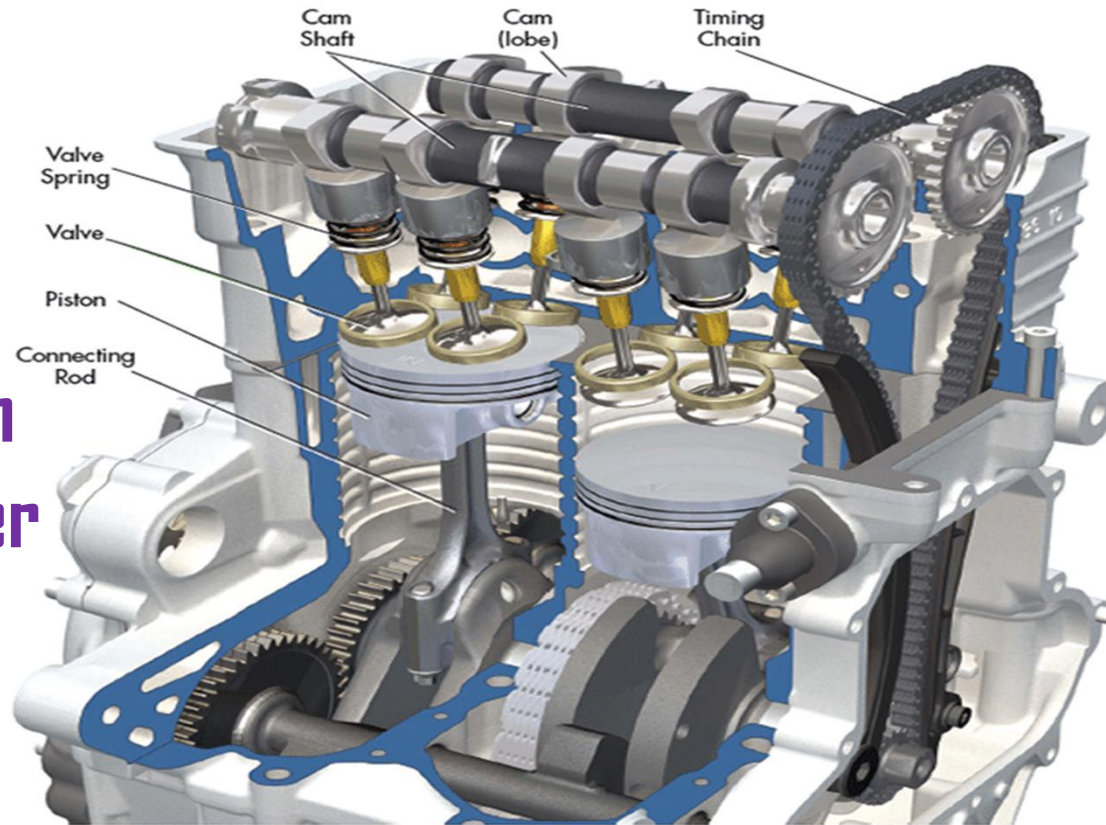
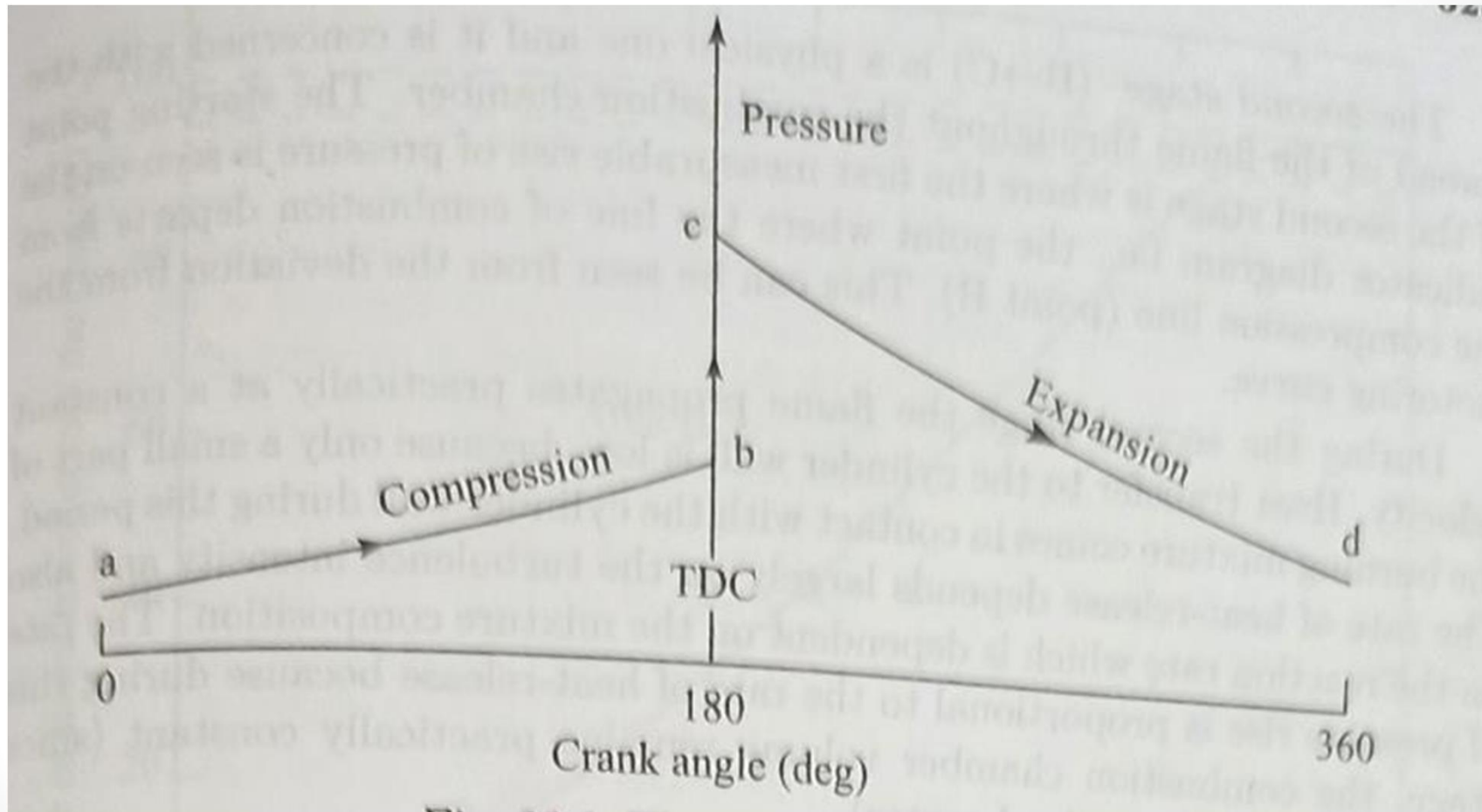


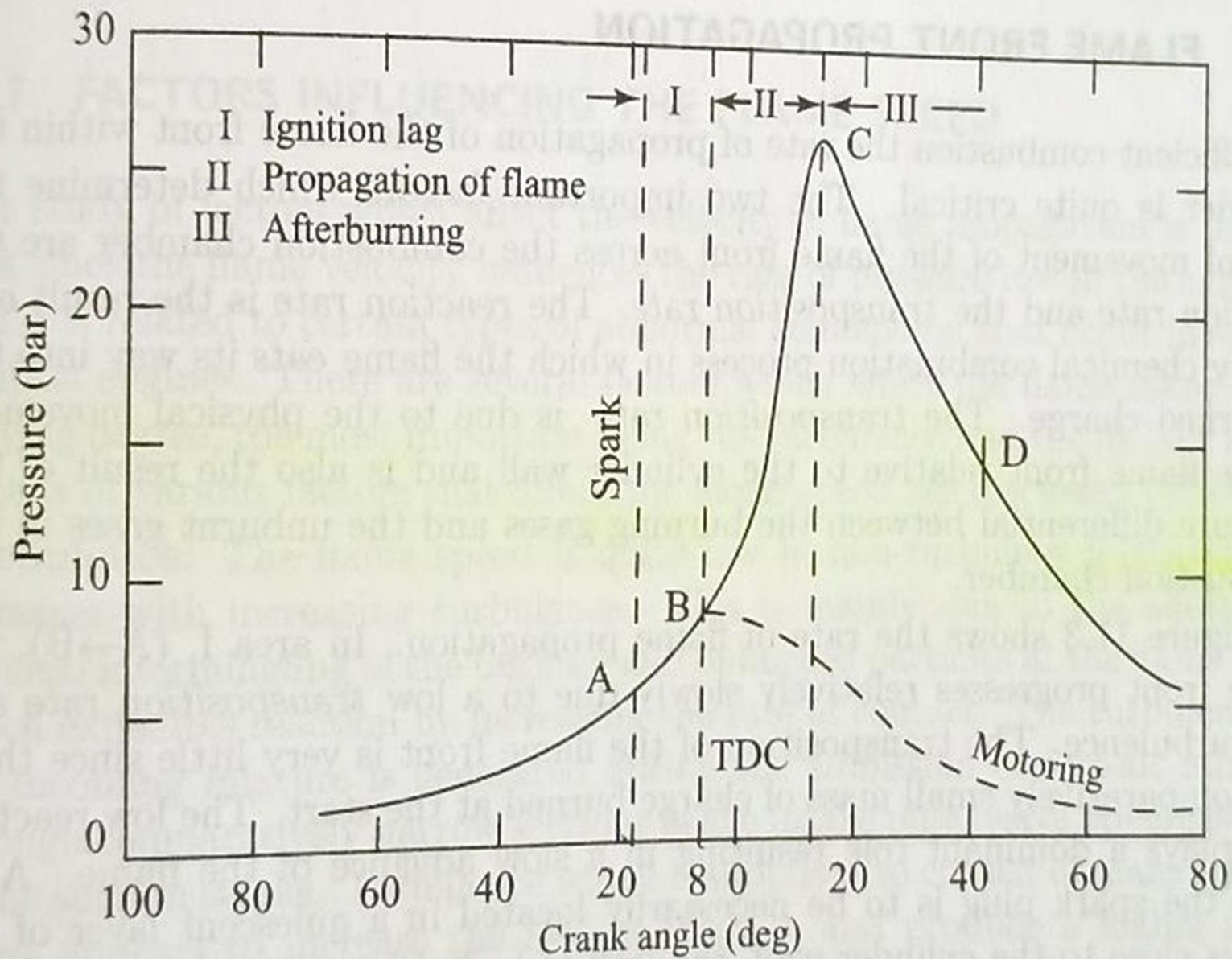
I C Engine, Steam & Nuclear Power



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Stage of combustion in SI engine





Point A is the ignition of spark it is generally 20° BTDC, Point B is the Point at which beginning of Pressure rise can be detected. It is generally 8° BTDC. Point C is the Attainment of peak Pressure. AB is first stage of combustion. BC is the second stage of combustion. AB is called ignition lag or preparation of flame phase. In which the growth is due to development of self propagation nucleus of flame take place.

This chemical process depending upon both Temp & Pressure,

BC is concerned with the spread of flame throughout the combustion chamber.

Flame growth

In CD of the Flame Velocity decreases during this stage. The rate of combustion becomes Low due to lower flame velocity and reduced Flame front surface. Since the Expansion stroke starts before this stage of combustion, there can be no pressure rise during this stage.

Some amount of fuel are present at the end of during Expansion 8 to 10%, at at time burning is called after burning.

Normal combustion