Define following terms Fluctuation of energy, co-efficient of fluctuation of energy, co-efficient of fluctuation speed, maximum fluctuation of energy

Question:
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Fluctuation of energy, co-efficient of fluctuation of energy, co-efficient of fluctuation speed, maximum fluctuation of energy.

Answer:
Fluctuations of energy: The variations of energy above and below the mean resisting torque line are called fluctuations of energy.

Coefficient of fluctuation of energy: It may be defined as the ratio of the maximum fluctuation of energy to the work done per cycle. Mathematically, Coefficient of fluctuation of energy, E = Maximum fluctuation of energy/Work done per cycle

Coefficient of fluctuation of speed: The difference between the maximum and minimum speeds during a cycle is called the

maximum fluctuation of speed. The ratio of the maximum fluctuation of speed to the mean speed is called the coefficient of fluctuation of speed.

Maximum fluctuation of energy: ΔE = Maximum energy – Minimum energy = $(E + a_1) - (E + a_1 - a_2 + a_3 - a_4) = a_2 - a_3 + a_4$