Slows down rate of chain reaction.

Absorbs excess neutrons

Made of Boron or Cadmium

Control Rods

Hermetically Sealed.

Internal temp reaches 320°

Reactor Core

20CM thick Metal

Turbine

+1500 spins per minute

Alternater

Transformer

Uranium-235 -238 fuel rods 1CM in diameter

Core is encased in concrete

Rods contain radioactive isotopes

Steam generator

Hot water

Condenser

10% of water goes as vapour

90% is pumped back into the water course.

Water Course Sea/Lake/River

Moderator

Ordinary or heavy water is used because of deutrons

Controls the speed of reaction - controlling heat energy

Prevents too much heat being released which is unsafe as it could cause the reactor to blow.

Fission: (Split)

Nucleus is bombarded with neutrons and cause explosions and heat, which leads to more nucleus being released further bombarding causing a chain reaction.

E.g: Belgium:

- 50% of electricity is Nuclear fission generated
- 2 nuclear power plants.