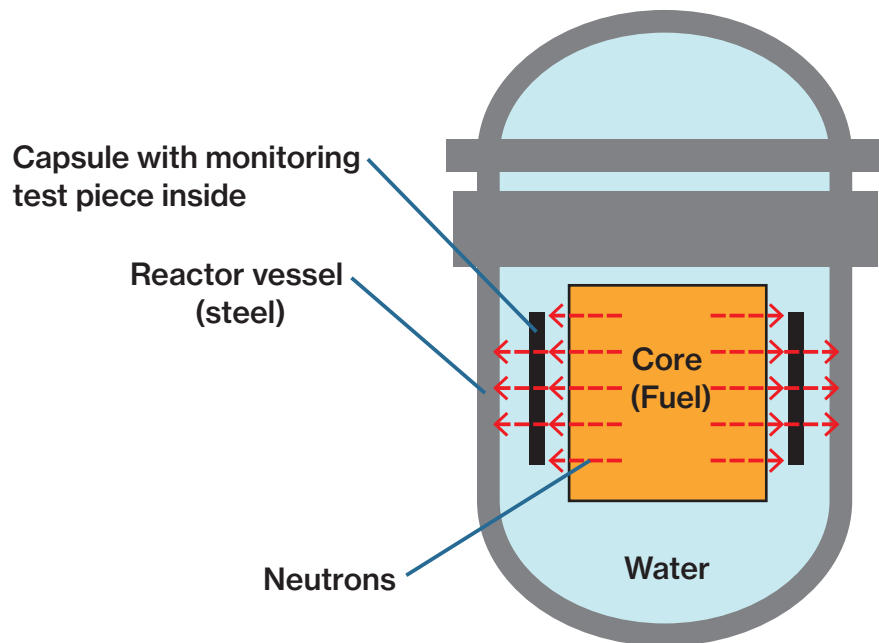


Monitoring Test Piece Inside Reactor Vessel and Ductile-Brittle Transition Temperature

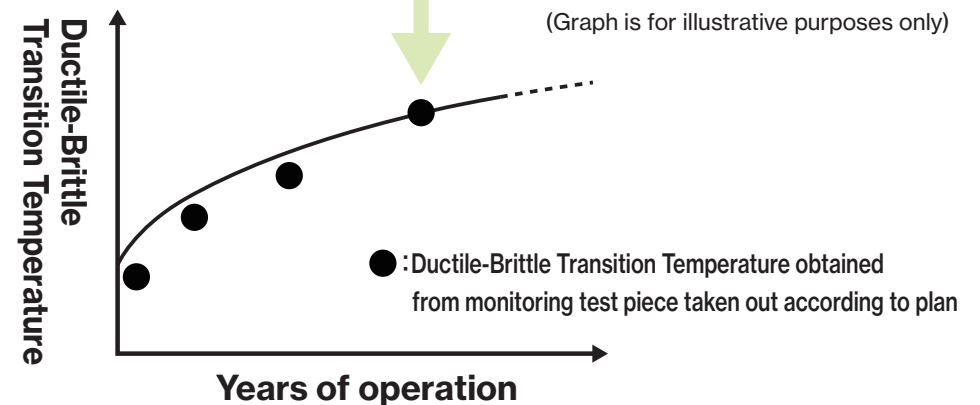
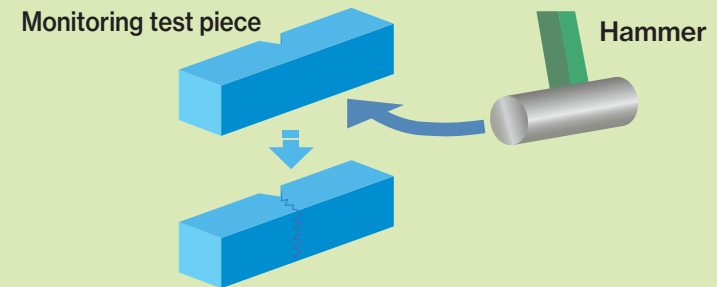
In order to monitor the effect on the reactor vessel from irradiation with neutrons, a “monitoring test piece” made from the same material as the reactor vessel is installed inside the reactor vessel in advance. Changes in the toughness (embrittlement) of the reactor vessel can be evaluated by taking out the monitoring test piece at regular intervals according to the regulations and standards, conducting the Charpy impact test, and finding the change in the “Ductile-Brittle Transition Temperature”.

Visualization of pressurized water reactor vessel neutron irradiation



Visualization of Charpy impact test

Determine the energy that breaks the monitoring test piece and calculate the Ductile-Brittle Transition Temperature



Visualization of change of Ductile-Brittle Transition Temperature