

General features of Fast Reactor Core

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1 Quiz

1.1 Questions

1. Why is the core of fast reactor hexagonal?
2. Name the most commonly used material used as fuel for fast reactor core.
3. Why are reflectors used in fast reactors?
4. Why are higher burnups desirable?
5. Which one of the following is the appropriate measure of neutron dose on materials in a nuclear reactor?
a) neutron flux b) linear rating c) fluence d) burnup

1.2 Answers

1. To account for breeding requirements and achieve high burnup
2. $\text{UO}_2\text{-PuO}_2$ (mixed oxide fuel)
3. To minimize neutron loss and to achieve flux flattening
4. With higher burnups, more thermal and hence electrical energy can be generated per unit mass of fuel. Therefore, higher burnups are desirable from the aspect of economics.
5. (c) fluence