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Sommario/riassunto

The book provides an overview of the advantages in using lead enriched with stable lead isotope lead-208 instead of natural lead as a coolant of fast reactors (FRs) and accelerator driven systems (ADS). Lead-208 as a twice magic nucleus has low cross sections of neutron radiation capture and small moderation of neutrons in the range of neutron energies 10 eV 20 MeV, i.e. in FR and ADS core neutron spectra. These unique features of lead-208 lead to the economy of neutrons, hardening the neutron spectra and other profitable factors.