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Development of Safety Design Criteria for the Lead-cooled Fast Reactor

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The Generation-IV International Forum Lead-cooled Fast Reactor (LFR) provisional System Steering Committee has developed a set of Safety Design Criteria (SDC) dedicated to LFRs. The objective of the LFR SDC is to present a set of reference criteria for the design of systems, structures, and components of LFR systems with the aim of achieving the safety goals of the Generation-IV reactor system. The work has been based on the SDC for the Sodium-cooled Fast Reactor (SFR), since the GIF LFR and SFR systems share a number of design solutions and some safety-related phenomenology. For the development of LFR SDC it was also found useful to use the same structure and methodology of the already existing SFR SDC. A set of eighty two (82) reference safety design criteria for LFRs are systematically and comprehensively laid out in the SDC. The paper summarises results of the steps taken to draft the present set of LFR SDC and provides outlook for their further review and development, in particular towards the individual sets of detailed Safety Design Guidelines.

Country/Int. Organization

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