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The 'Handbook on Thermal Hydraulics in Water-Cooled Nuclear Reactors' is a comprehensive guide focusing on the modeling and simulation aspects of nuclear reactor thermal hydraulics. Edited by Francesco D’Auria and Yassin A. Hassan, the book consolidates contributions from numerous researchers in the field. It emphasizes the intricacies of system codes, computational fluid dynamics, and the validation and verification processes crucial for nuclear reactor safety and design. The volume addresses the application of these methodologies in accident analysis, highlighting the best estimate plus uncertainty approach. This resource is aimed at professionals and researchers in nuclear engineering, providing detailed insights into the thermal hydraulic phenomena associated with nuclear reactors.