1. Record Nr. UNINA9911045227203321

Titolo	Handbook on thermal hydraulics in water-cooled nuclear reactors . Volume 1 Foundations and principles / / edited by Francesco d'Auria, Yassin A. Hassan
Pubbl/distr/stampa	Cambridge, MA : , : Woodhead Publishing is an imprint of Elsevier, , [2024] ©2024
ISBN	0-323-85607-1
Edizione	[Second edition]
Descrizione fisica	1 online resource (932 pages)
Collana	Woodhead Publishing Series in Energy
Disciplina	621.4834
Soggetti	Thermal hydraulics Nuclear reactors Reactors nuclears Hidràulica tèrmica
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
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Sommario/riassunto

This handbook provides an in-depth analysis of thermal hydraulics in water-cooled nuclear reactors, addressing foundational principles and practical applications. Edited by Francesco D'Auria and Yassin A. Hassan, it compiles contributions from leading experts in the field. The book covers a wide range of topics, including system thermal hydraulics history, two-phase flow development, heat transfer, and safety assessment. It emphasizes the role of thermal hydraulics in nuclear power plant design and safety, offering insights into pressure drops, constitutive equations, and modeling techniques. Aimed at practitioners and researchers, this comprehensive guide serves as a valuable resource for understanding the critical aspects of nuclear reactor operation and safety.