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Nota di contenuto	Structural safety and testing of dams -- Study of hydraulic soil stability and seepage effects -- Hydrodynamics and rheology.
Sommario/riassunto	This open access book delves into discussions central to hydraulic structures and research in the realm of hydrodynamics. Hydraulic structures stand as pivotal components within civil engineering and construction, playing a safeguarding role for structures vital to human development. Examples encompass the Hoover Dam in the USA, the Three Gorges Dam in China and the Almendra Dam in Salamanca, Spain. Monitoring the safety and ensuring the structural stability of hydraulic structures has long remained a focal point within hydraulic engineering. Factors affecting the safety of hydraulic structures, water pressure, and loading demand meticulous attention. The stability of structures and materials experiences degradation due to hydraulic impact and long-term corrosion, compromising the safety of hydraulic structures. The inability to adequately support and release water during flood season or flooding can result in irreversible damage. The book

aims to furnish global civil engineers with cutting-edge research and engineering examples pertaining to the safety and hydrodynamics of hydraulic structures, with a particular emphasis on dam safety and inspection. It endeavors to inspire novel insights and research avenues for the readers and provide some experiences and results for disciplinary research in this field. The topics of this book include but are not limited to the following: 1. Structural safety and testing of dams 2. Study of hydraulic soil stability and seepage effects 3. Hydrodynamics and rheology.
