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Nota di contenuto	1. Performance of pile foundations. 1.1. Introduction. 1.2. Performance of pile foundations during earthquake loading. 1.3. Soil liquefaction and lateral spreading. 1.4. Performance of pile foundations in past earthquakes. 1.5. Modes of pile failure in liquefiable soils. 1.6. Summary -- 2. Inertial and kinematic loading. 2.1. Pile behaviour under earthquake loading. 2.2. Analysis of laterally loaded piles under static conditions. 2.3. Analysis of laterally loaded piles under earthquake loading. 2.4. Kinematic response in level ground. 2.5. Kinematic loading in laterally spreading soil. 2.6. Inertial response. 2.7. p-y analysis of piles. 2.8. Limit equilibrium analysis of piles subjected to earthquake loading. 2.9. Provisions in Eurocode 8. 2.10. Summary -- 3. Accounting for axial loading in level ground. 3.1. Liquefaction as a foundation hazard. 3.2. Influence of axial loading on pile failure. 3.3. Axial load transfer due to liquefaction. 3.4. Pile settlement. 3.5. Guidelines for designing against bearing failure. 3.6. Instability of single piles and pile groups. 3.7. Bearing vs. buckling failure. 3.8.

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Sommario/riassunto

Pile foundations are the most common form of deep foundations that used both onshore and offshore to transfer large superstructure loads into competent soil strata. This book provides many case histories of failure of pile foundations due to earthquake loading and soil liquefaction.