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1.7. Bibliography; Chapter 2. Dynamic Behavior of Concrete: Constitutive Models; 2.1. Dynamics of concrete structures; 2.1.1. Macroscopic phenomena; 2.1.2. Perforation
2.1.3. Ejection of fragments2.1.4. Loading range; 2.1.5. Loading path; 2.2. Fast dynamics applied to concrete; 2.2.1. Impacts and waves; 2.2.2. Impact and shock polar curve; 2.2.3. Shock between two solids; 2.3. Scabbing; 2.4. Effect of a shock wave on the structure of materials; 2.5. Modeling types; 2.5.1. Behavior description theoretical frames; 2.5.2. Integrating sensitivity to the strain rate; 2.5.3. Elasto-plasticity and criteria; 2.5.4. Damage; 2.5.5. Notion of a state law; 2.5.6. Location limiter and time sensitivity; 2.6. Models; 2.6.1. Elasticity-based model
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3.2.2. Accelerometer networks3.2.3. Accelerometer data banks; 3.3. Quantitative characterization of seismic movements; 3.3.1. Time maximum values; 3.3.2. Spectral characterizations; 3.3.3. Features of hybrid characterizations; 3.3.4. Caveats regarding differential motions; 3.4. Factors affecting seismic motions; 3.4.1. Spectral signature of the seismic source; 3.4.2. Effects of propagation in the Earth's crust; 3.4.3. Site effects; 3.5. Conclusions; 3.6. Bibliography; Chapter 4. Soil Behavior: Dynamic Soil-Structure Interactions; Introduction; 4.1. Behavior of soils under seismic loading
4.1.1. Influence of the nature of soils on seismic movements

Sommario/riassunto

While the static behavior of concrete has been the subject of numerous works, the same cannot be said for the dynamic behavior. This book sets out to remedy this situation: it begins by presenting the most frequently used experimental techniques in the study of the dynamic behavior of concrete, then continues by examining seismicity and seismic behavior, soil behavior, models of concrete structures subject to seismic activity, seismic calculation methods of structures, and paraseismic engineering.