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Nota di contenuto	Table of Contents; Title; Copyright; Preface; Introduction; I.1. Context; I.2. Principle of the technique and illustrative experiments; 1 Experiments in a Representative Environment; 1.1. Mechanical set-up; 1.2. Pulsed arc electric generator; 1.3 Material properties; 1.4. Measurements of radial permeability; 1.5. X-ray tomography; 1.6. Results on model materials; 1.7. Summary of the results on sandstone; 1.8. Discussion; 2 Computational Modeling of the Process: Principles; 2.1. Pressure generated by the pulsed arc electrical discharge; 2.2. Mechanical modeling of rocks under dynamic loads 2.3. Coupled effects between damage and permeability 2.4. Summary and conclusions; 3 Validation of the Computational Model; 3.1. Simulation of the experiments in uniaxial compression; 3.2. Confined tests on hollow cylinders; 3.3. Isotropic versus anisotropic permeability; 3.4. Conclusions; 4 Computations on Representative Reservoir Geometries; 4.1. Effect of repeated shocks; 4.2. Simulation on a typical reservoir geometry; 4.3. Optimization of the process; Concluding Remarks and Future Outlook; Bibliography; Index; End User License Agreement

