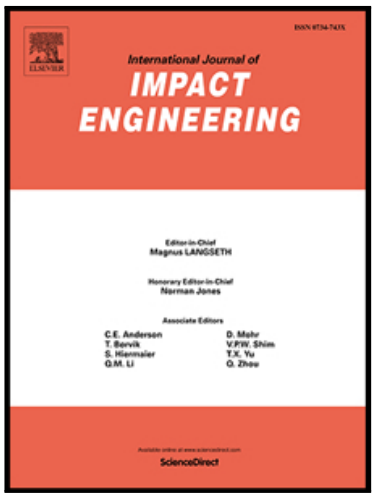

Experimental and Numerical Studies on the Expanding Fracture Behavior of an Explosively Driven 1045 Steel Cylinder

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Highlights

- The fracture behavior of a 1045 steel cylinder subjected to internal explosive loading is studied.
- The initiation and propagation of multiple shear bands in the expanding cylinder are
- numerically reproduced.
- The fracture mechanism, size and velocity of fragment are analyzed and compared between the experiment and simulation.
- The close agreements between experiment and simulation demonstrate the validity of the multi-stage model for shear bands.