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Numerical study on the structural response of blast-loaded thin aluminium and steel plates

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Highlight

- The inelastic response of blast-loaded thin plates is studied numerically
- Numerical simulations are validated against experimental data
- The negative phase dominated the response at some loading and structural conditions
- The influence of the negative phase was found to depend on the timing and magnitude of the peak negative pressure
- Ductile failure was also predicted by using an energy-based failure criterion

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