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Simulation of wind-borne missile impact using the Lagrangian and Smooth Particle Hydrodynamics formulations

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Highlights

- Four impact tests on reinforced concrete panels by Schedule 40 pipes were simulated using the Lagrangian and SPH formulations to validate a numerical model.
- The Lagrangian formulation reasonably predicted panel response and local damage to the thinner panels but predicted less well the results of tests on thicker panels.
- The SPH model reasonably predicted panel response and local damage for the range of panel thicknesses chosen.
- Lack of information and metadata from the experiments poses a challenge to fully validate a numerical model for impact analysis.

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