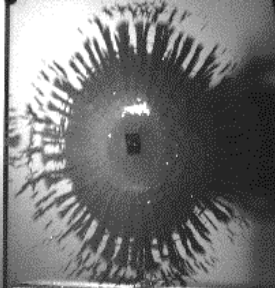


ExperDYN testing platform: High-speed gaz launchers

Materials and structures under impacts and shocks



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Impact testing of materials and structures

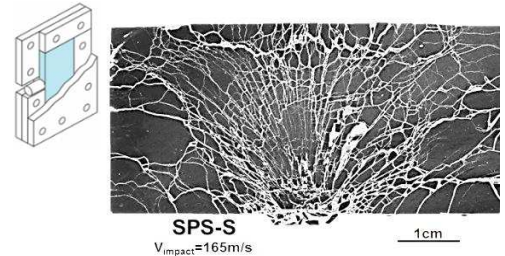
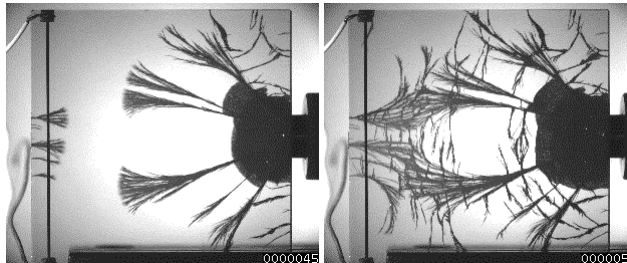
ExperDYN testing platform hosts 3 gas-launchers dedicated to the testing of ceramic, concrete, composite and polymeric structures. The purpose is to better understand the relationship between the microstructure of the tested materials, their mechanical behaviour and the underlying damage mechanisms as well as to validate the numerical simulation tools.

20 and 50-mm-calibre gas launchers for Edge-On Impact (EOI), Normal and Tandem impact tests (V_{impact} : 10-300 m/s)



*EOI in open configuration: analysis of fragmentation
process with an ultra-high speed camera*

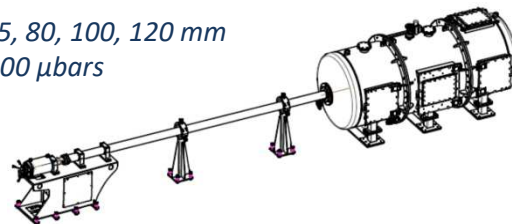
*Sarcophagus configuration: post-
mortem analysis of fragmentation*



Multi-calibre gas launcher for plate-impact experiments under vacuum (V_{impact} : 10-1100 m/s)

*Dynamic testing at very-high loading-rates
(isentropic compression, Shockless spalling)*

*Calibres: 25, 80, 100, 120 mm
Vacuum: 100 μ bars*



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