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A method to replace lightning strike tests by ball impacts in the design process of lightweight composite aircraft panels

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Highlights

- Lightning strike induced core damage in composite panels have mechanical origin.
- Calculations and tests of the equivalence strategy rely on transmitted impulse.
- The method and hypothesis are validated using kinematics measures versus time.
- Lightened plates velocities and final delamination area are well reproduced.
- Tests highlight paint removal or maintain effects on delamination area and location.

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