A Novel Design for Reinforcing the Aircraft Tail Leading Edge Structure against Bird Strike

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Highlights

- A novel Tail Leading Edge structure by employing the finite element method coupled with the SPH method was designed.

- Bird strike experiments are conducted to validate the numerical model.

- Good agreements between simulation and experimental results show that the coupled SPH-FE method provides a valid and effective means to predict the deformation and damage behavior of aircraft structures subjected to bird strike and thus can be used as a tool to design bird strike-resistant structures.