Deformation and perforation of sandwich panels with aluminum-foam core at elevated temperatures

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Highlights

- low-velocity impact tests at elevated temperatures were carried out for sandwich panels
- differences of deformation and failure behaviors of sandwich panels under quasi-static and low velocity impact tests were studied at different temperatures
- energy absorption capability of sandwich panels were explored and compared at different temperatures
- dynamic energy enhancement was observed by comparing quasi-static perforations with the impact cases
- effects of several key parameters on the load carrying capacity and energy absorption of the sandwich panels during perforation were discussed