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An Investigation on the Energy Absorption of Sandwich Panels With Aluminium Foam Core under Perforation Test

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Abstract : Metallic sandwich structures with aluminum foam core are good energy absorbers. In this paper, perforation test were carried out on different samples to study energy absorption. In the experiments, effect of several parameters, i.e. skin thickness and thickness of foam core, on the energy absorption, delamination zone of back faces and deformation strain(φ) are discussed. Results show that increasing plates thickness will results in more absorbed energy and delamination. Moreover, thickening foam core has the same effect.

Keywords : sandwich panel, aluminium foam, perforation, energy absorption
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