**Effects of interleaved flax layers on the dynamic characteristics of glass composites**

Significant attention has been paid to the integration of flax fibres into the composite market to parallel the increasing global environmental consciousness. However, the Uptake in industry has not matched the academic interest which remains limited to non-structural applications. Despite having relatively poor mechanical properties, flax demonstrates excellent damping capabilities. The hybridization of flax fibres with carbon fibres has therefore been a popular approach to accommodate flax fibres into the market, taking account of the benefits of both materials. However, there are limited investigations into the hybridization with glass fibres, this is despite the fact that the largest percentage of usage of the fibre reinforcement market is held by glass fibres. These fibres are often cheap to produce and therefore utilise different production methods, such as resin infusion, which change the material properties. Furthermore, e-glass cloth is normally manufactured using woven roving, which reduces the cost but reduces the mechanical properties and changes the behaviour of the composite from the unidirectional cloths typically used for carbon. For successful applications of hybrid glass-flax composites an understanding of how these differences may affect the properties is necessary; predominantly through experiments on materials that are manufactured in the same manner as in industry. Therefore, this study aims to investigate the effects of the interleaved flax layers as a damping layer on the dynamic characteristics of glass composites and to model the material damping for the laminated composite plates. The samples better replicate the cloth type and production processes that the current literature, better defining the differences in behaviour from previous experiments. This allows a better assessment of the feasibility of flax-glass composites for use in dynamic damping of large structures.