A mini review on Natural Fiber Honeycomb (NFH) sandwiched structure composite: flexural perfomance perspective

ABSTRACT

Natural Fiber Honeycomb (NFH) sandwiched structure composite is a type of composite that uses natural fiber as the reinforcement material and honeycomb structure in the form of a sandwich panel. The demand for commercial use of natural fiber-based composites is increasing in the past few years in many industrial sectors. The increase in popularity of natural fibers is because of their particular properties, price, health benefits, and recyclability. This paper aims to analyze the data and analysis of the past research about NFH sandwiched structure composite in terms of the materials used to make the NFH, the physical and mechanical properties, and their applications. Based on the literature review conducted, there were many types of materials used to make the NFH sandwiched structure composite. Some experimental tests were planned and conducted to analyze the mechanical properties of the NFH and its potential to be used in the desired industries. However, there are not many implementations of NFH composite in the construction industry. This is due to the concern related to the issue of the structural integrity of the NFH composite. From the literature review conducted, most of the research shows a positive analysis of the mechanical properties and the potential of the developed NFH to be used for the targeted industry in the study. Therefore, it can be observed that the material used in this study has a high potential to be used in the construction industry.