

Review on low velocity impact of nanocomposite in addition of nanoclays

ABSTRACT

Many exciting new materials that generated with novel properties with rapidly growing field as nanocomposites. Hybrid materials such as polymer nanocomposites has at least one dimension in the nanometer range are made of dispersed inorganic filler in an organic polymer matrix. When a small amount of filler is used, the macroscopic properties of the polymer will strongly modified. Furthermore, the nanofillers will has a greater aspect ratio. Therefore, nanocomposites usually have better properties such as higher mechanical properties and thermal stability compared to neat polymers. Aerospace, automotive, electronics, and biotechnology industries offered the new technology and business opportunities by applications of nanocomposites due to its environmentally friendly properties. The results of an experimental presents the low velocity impact made on different composite with an addition of nanofillers. A drop weight testing machine are used to evaluate composites behaviour with different nanoclay content. In conclusion from this review, nanoclay loading with 3% shows the best properties among the other loading with least damage area and lowest absorbed energy.

Keyword: Low velocity impact; Nanocomposites; Nanofiller; Nanoclay