

Preliminary review of biocomposites materials for aircraft radome application

ABSTRACT

An aircraft radome usually refer to radar transparent, dome-shape structures which protects radar antennas on aircraft from aerodynamic loading, weather as well as impacts from bird strikes. Materials that are used for small aircraft radome usually have low dielectric constant and high toughness. Current composite material using high strength fibers such as glass fiber, carbon and aramid are commonly used in aerospace structures. However, the need for biodegradable materials has prompted the usage of natural fibers. Natural fibers have comparable mechanical properties such as low weight, low cost, renewable and biodegradable. In this preliminary work, comprehensive reviews of biocomposites materials are discussed in term of their properties for the purpose of evaluation for aircraft radome application. The present review will cover five local natural fibers namely bamboo, banana, kenaf, oil palm and pineapple leaf fiber.

Keyword: Biocomposites; Kenaf; Radome