Characterization of the thermal stability of polyimide and glass fiber composite for aerospace materials

유태원, 김진영, 한학수*
연세대학교
(hshan@yonsei.ac.kr*)

Polyimide, One of the most outstanding performing polymer has drawn considerable attention due to its high thermal stability with chemical resistance and excellent electrical and mechanical properties. In this study, Polyimide has been combined together with an inorganic material using a prepreg method. The glass fiber plays a crucial roll in improving the thermal stability of the product due to its strong fiber – matrix interaction . This composite was successfully characterized by confirming the synthesis using the FT-IR. The TGA (Thermogravimetric analyzer) and DSC (Differential Scanning Calorimeter) was used to measure the glass transition temperature and the 5% decomposition temperature of the composite.