World Academy of Science, Engineering and Technology
International Journal of Materials and Metallurgical Engineering
Vol:9, No:10, 2015

Effect of UV Radiation to Change the Properties of the Composite PA+GF

Authors : Lenka Markovičová, Viera Zatkalíková, Tomasz Garbacz

Abstract : The development of composite materials and the related design and manufacturing technologies is one of the most important advances in the history of materials. Composites are multifunctional materials having unprecedented mechanical and physical properties that can be tailored to meet the requirements of a particular application. Some composites also exhibit great resistance to high-temperature corrosion, oxidation, and wear. Polymers are widely used indoors and outdoors, therefore they are exposed to a chemical environment which may include atmospheric oxygen, acidic fumes, acidic rain, moisture heat and thermal shock, ultra-violet light, high energy radiation, etc. Different polymers are affected differently by these factors even though the amorphous polymers are more sensitive. Ageing is also important and it is defined as the process of deterioration of engineering materials resulting from the combined effects of atmospheric radiation, heat, oxygen, water, micro-organisms and other atmospheric factors.

Keywords : composites with glass fibers, mechanical properties, polyamides, UV degradation
Conference Title : ICMET 2015 : International Conference on Materials Engineering and Technology
Conference Location : Paris, France
Conference Dates : October 29-30, 2015