

IRAP071

Ionizing radiation effects studies on polyamide 6 and polyamide 6.6 properties using rice husk ash as filler

Waldir Pedro Ferro^a, Hélio Wiebeck^b, Leonardo Gondim de Andrade e Silva^{a*}

^aInstituto de Pesquisas Energéticas e Nucleares – IPEN-CNEN/SP

Av. Prof. Lineu Prestes, 2242 – Cidade Universitária

05508-000 São Paulo – SP, Brazil

^bEscola Politécnica da Universidade de São Paulo

*lgasilva@ipen.br

In order to improve the dimensional stability, as well as, electrical, mechanical and thermal properties of polymers, it has been developed new filler to this purpose. The most applied filler to propitiate the features previously mentioned are the glass and carbon fibers, the mineral filler as the calcium carbonate, the talc and the micro glass sphere. The rice husk ash was tested as filler with good results. The main aim of this work is to study the effect of ionizing radiation on the properties of polyamide 6 (PA 6) and polyamide 6.6 (PA 6.6), which are ones of the main engineering plastic with applications in several productive areas, using rice husk ash as filler. The samples were injected and after their mechanical and glow wire properties were measured.