

Wood is the most building materials widely used since prehistory for the construction of houses, tools, weapons. Accidents occurring during the use of materials caused by different defaults, as: knots, resin pockets, cracks. These various defaults and others are the starting point of the principle of crack mechanics. Our present work focuses on determining the resistance to crack propagation of three types of Algerians wood, (Aleppo pine, eucalyptus and oak), by calculating the energy release rate  $G$  (mode I). The estimation of factor  $G$  allows the possibility of fracture propagation