

Experimental and Numerical Modeling of Dynamic Axial Crushing of a Composite Glass/PEHD

Authors : Mahmoudi Nouredine, Kaou Abdellah

Abstract : Energy absorption is a major requirement for automotive structures. Although crashworthy structures of composite based glass fiber have exhibited energy absorption greater than similar at other composites structures, the crush process in many cases is accompanied by fracture, rather than by plastic deformation. The crash experiments show that the tubes are crushed in progressive manner start from one end of the tubes and delamination takes place between the layers. To better understand details of the crash process, ABAQUS finite element code is used.

Keywords : Energy absorption, crash, PEHD

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