Keywords: Impact, Composite, Tube, ANSYS/LS-DYNA.

The research studies the impact behavior of the carbon composite reinforced aluminum tubes, and also investigates the effects of using different stacking sequences on the behavior of the tubes. The study shows that the composite structures possess the good impact resistance. Also, the aluminum is often used as the main component because of its good ductility and cheaper price. In order to achieve the goal of the lightweight, the carbon composite are most commonly used as materials to reduce the weight.

The CAE (Computer Aided Engineering) software, ANSYS/LS-DYNA was used to analyze dynamic simulations. The study shows that the composite structures possess the good impact resistance. Also, the aluminum is often used as the main component because of its good ductility and cheaper price.


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