

Abstract of the Specification

The molding technique and mould making process for a flame retardant bending beam with a 3D nylon air duct

This invention relates to the mould making and molding process of a 3 Dimension (3D) nylon air duct' s mouding, flame-retardant and bending beam. This technique includes the following steps: Step 1: making a 3D nylon air duct; step 2: materia selection of the carbon fiber flame-retardant prepreg; step 3: lamination and pre-shaping of prepreg; step 4: curing of composites. The mould consists of upper part, lower part, 2 pieces of slide blocks and air nozzle device which locates on the lower part mould. The 3D nylon air duct nozzle is placed at the mouth of the air nozzle device. The lower mould works as a reference for product placement, and 2 pieces of slide blocks will be placed on both sides of it, and then upper mould will be placed and fixed above the lower mould as well as slider blocks in order to undergo the molding process. Comparing with traditional metal molded bending beam, the one with 3D nylon air duct technique can achieve the same flame retardant effect with advantages of simple operation, flexible in product shape, higher strength, lighter weight and corrosion resistance.

[Figure 1]