

THERMOPLASTIC MOLDING PROCESS AND APPARATUS

Abstract

A system (10) and method for forming an article from thermoplastic material and fiber. The method includes heating thermoplastic material to form a molten thermoplastic material for blending with the fiber. The molten thermoplastic material is blended with the fibers to form a molten composite material having a concentration of fiber by weight. The molten composite material may then be extruded through dynamic dies (16) to deliver discrete controlled material that is gravitated onto a lower portion of a mold (19). The lower portion of the mold (19) may be moved in space and time while receiving the flow of composite material to deposit a predetermined quantity of molten composite material thereon conforming to mold cavities of the lower and an upper portion of the mold (19, 23). The upper portion (23) of the mold may be pressed against the predetermined quantity of molten composite material and closing on the lower portion of the mold (19) to form the article.

Figure 1