Effect of fiber orientation & distribution for FRP(Fiber Reinforced Plastics)

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The reinforcement using fibers is an effective method to enhance the properties of plastic. The objective of Fiber reinforcement is to improve the properties of base polymer. FRP(Fiber Reinforced Plastics) is new materials mainly focus on metal replacement, and its final products have exceptional stiffness and excellent impact resistance due to network structures of fibers in them. The reinforcement additives such as glass fibers that run continuously through the length of the pellets help these compounds exhibit better mechanical properties than short-fiber reinforced thermoplastics

In this study, we made FRP(Fiber Reinforced Plastics) including the reinforcement (glass fiber, carbon fiber) and thermoplastic. Our research focused on the effect of fiber orientation & distribution for FRP(Fiber Reinforced Plastics). To improve the physical properties of FRP, we have to know the fiber orientation & distribution in fiber reinforced plastics.