

Overview of Hand Layup FRP Molding Process

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Abstract: This paper is dealing with the hand layup process used in FRP manufacturing. Fiber reinforced polymer commonly known as FRP is a composite material made of a polymer matrix reinforced with fiber. Composite Materials are becoming more popular gradually replacing traditional material with additional strength, lighter weight and superior property. Fiber reinforced composites used in water transport, construction industry, toys, instrumentation, medicine etc. Based on application and reinforcement used, there are many ways to manufacture parts with fiber reinforced composites, the fiber is usually glass carbon or aramid, although other fiber such as wood or asbestos have been sometime used. FRP are manufactured by two methods: pultrusion and hand layup as open mold method. Hand layup is open molding process and it's the oldest moulding process for creating FRP product. In this process no technical skills or complex machine needed its ideal for low volume. labor intensive, larger products such as vessel, tanks, car bodies, and oil pipeline. as the name suggests, this process is all done by hand so the quality really depend on the persons skill in crafting FRP. Hand layup is an open molding method suitable for making wide variety of composite product from very small to very large. Production volume per mold is low however it is flexible to produce substantial production quantity using multiple molds. Hand layup is simple composite molding method, offering low-cost tooling, simple processing, and wide range of part size..

Keywords: FRP, hand layup

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