

Abstract

Procedure for making pre-impregnated reinforced composite, as well as fiber reinforced composite, and their application

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The present invention relates to a method for producing a fiber-clutch reinforced composite material comprising: Preparing a fiber clutch, comprising preparing an arrangement of two or more layers of fiber that are partially or completely disposed one on top of the other, wherein one or more fiber layers comprise at least 50 wt.-% of the fibers selected from the group consisting of carbon fibers, precursor fibers of carbon fibers, ceramic fibers and mixtures thereof, affixing at least one fiber layer onto one or more other fiber layers using an affixing binder thread, wherein the affixing binder thread comprises one or more fibers selected from the group consisting of carbon fibers, precursor fibers of carbon fibers, ceramic fibers and mixtures thereof; high temperature treating the fiber clutch at a temperature of at least 400 °C under an inert atmosphere for a high temperature treatment period, impregnating the fiber clutch with at least one binder; curing the impregnated fiber clutch and optionally pressing at least one surface section of at least one surface of the impregnated fiber clutch before beginning and/or at least during a portion of the curing period, wherein a fiber clutch reinforced composite material is formed. The present invention also relates to the use of high temperature treated fiber clutch and to fiber clutch reinforced composite materials.

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(Fig. 4)

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