

Title (en)

METHOD AND APPARATUS FOR PRODUCING GAS OCCLUSION-FREE AND VOID-FREE COMPOUNDS AND COMPOSITES

Title (de)

METHODE UND APPARATUR FÜR DIE PRODUKTION VON VERBINDUNGEN UND VERBUNDSTOFFEN FREI VON GASOCCLUSIONEN UND HOHLRÄUMEN

Title (fr)

PROCEDE ET APPAREIL POUR PRODUIRE DES COMPOSES ET DES COMPOSITES EXEMPTS D'OCCLUSIONS GAZEUSES ET EXEMPTS DE VIDES

Publication

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Application

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Priority

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Abstract (en)

[origin: WO9926999A1] The present invention discloses a generic method for producing void and gas occlusion free materials, as well as apparatuses for batch and continuous production of same. This generic method can be utilized in the production of a wide variety of polymeric compounds and composites and specifically encompasses the two ends of the polymeric composite spectrum, that is, polymer concretes on the one hand, and fiber-reinforced polymer composites on the other. The composite materials of the present invention are characterized by visual count as being void and gas occlusion free to the level of 1 micron at 1250x magnification. Concomitantly, the invention produces useful polymer concrete materials which exhibit substantially improved integrity for easy machining at high speeds, and high dielectric and mechanical strength, as compared with composite materials produced by conventional methods. Thus, one particularly well-suited application for the materials of the present invention is the class of high voltage electrical insulating materials and insulators where the presence of voids, or gas occlusion flaws, may have deleterious effects, leading to their early failure.

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