EP3126440 - Biomaterial composite

MEYERHOFF HANS-PETER (Inventor)

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The invention relates to a bio-material consisting of at least one thermoplastic, at least one biological filling material and long glass fibres.

EP3097606 - System and method for transmitting data or power across a structural component

WELDING INSTITUTE

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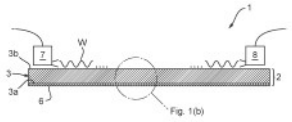
A system is disclosed for transmitting data and/or power across a structural component, comprising: a structural component, a first transducer and a second transducer.



The structural component is formed of first and second layers which conform to one another, the first layer comprising a dielectric composite material having first and second surfaces, and the second layer comprising a conductive material contacting the first surface of the first layer, whereby the electrical reactance of the first layer is configured for the propagation of electromagnetic surface waves thereacross.

The first transducer is on or adjacent the second surface of the first layer of the structural component at a first location, the first transducer being adapted to generate electromagnetic surface waves for carrying data and/or power across the first layer.

The second transducer is on or adjacent the second surface of the first layer of the structural component at a second location spaced from the first location, the second transducer being adapted to receive electromagnetic surface waves from the first layer and to retrieve data and/or power from the received electromagnetic surface waves.

The electromagnetic surface waves are transmitted from the first transducer to the second transducer by the first layer of the structural component. The dielectric composite material forming the first layer comprises reinforcement elements disposed in a matrix, and the first layer has a bulk region in which both the reinforcement elements and the matrix are present and a first skin region comprising a greater proportion of matrix to reinforcement elements than in the bulk region, the first skin region forming the first surface of the first layer.

A vehicle and a network each comprising the system are also provided, as is a method of its manufacture.

DE102014111659 - Composite pipe for load-bearing profiles or for sports article, in particular for a bicycle frame, as well as a tool and a method for the production of the composite pipe, bicycle frame made of the compound pipe

DOKTOR FLORIAN (Inventor)

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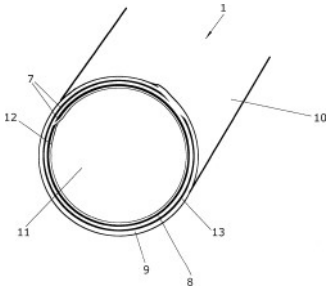
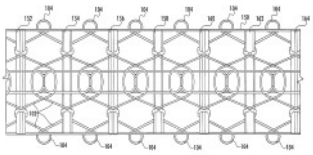


Composite pipe made of a composite layer for supporting profiles or for sporting goods, in particular for a bicycle frame, wherein the composite layer of at least one wood veneer layer and at least one reinforcing layer is formed, the superposed to the composite pipe are rolled up, a first section of the at least one wood veneer layer visible outer surface of the composite tube with a substantially in the longitudinal direction L of the composite tube extending wood fraying can form, by weight, the reinforcing layer at least one fiber-reinforced fiber layer of carbon fiber, aramide fiber, glass fiber, basalt fiber, hemp fiber or flax fibre is, the intermediate layer in the composite pipe is inserted and the composite layer with an adhesive partially is infiltrated.

US2016222599 - Basalt basket and dowel and method of manufacture

NO RUST REBAR

Published 2016-08-04



Basalt basket and dowel system to provide load transfer between adjoining slabs.

The basket is designed as a placement jig to properly position dowels during the concrete placement phase of construction.

Additionally to provide inherently tinsel and shear reinforcement to the edge of the concrete before during and after the contraction stress of curing concrete is relieved by scoring and to do so without the risk of rust spalling.

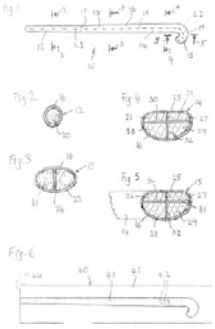
The baskets and dowels are constructed from continuous basalt fibers admixed with an appropriate adhesive to produce the required strength and provide load predictions in a similar manner to steel calculations.

The basalt basket is light weight and the configuration of its tendons interlaces provides sufficient space to allow concrete flow during placement and too prevent tinsel slippage within the cured concrete.

GB2533766 - Stick for hitting a sporting item

CROWN HOCKEY

Published 2016-07-06



A method of manufacturing a composite sporting stick, club or bat such as a hockey stick (10 figure 1) by assembling mating foam cores (20 figure 2) (21, 22 figure 3) (26-29 figure 4) with fibre sheets (24 figure 3) (30-32 figure 5), with the fibre sheets forming reinforcing ribs sandwiched between mating faces of the foam cores.

The stick being provided with fibre sheets around the outside of the foam cores to form an external shell (16).

The fibre sheets are impregnated with resin if they are not already impregnated with resin and cured in a mould (40 figure 6).

Heat may be applied while the stick is in the mould to cure the resin.

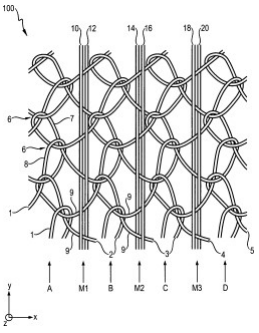
The number of foam cores may vary along the length of the stick.

Also claimed is the stick produced by the above method.

DE102015016298 - Fiber composite material from a knitted fabric with unidirectional running fibers and knitted fabric with unidirectional running fibers

TEC KNIT CREATIVCENTER FÜR TECHNISCHE TEXTILIEN

Published 2016-06-16

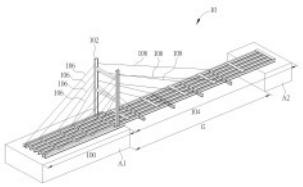


Composite of a knitted fabric and a matrix, in which the braid is embedded, wherein the knitting region: stitch yarns (1, 2, 3, 4, 5), the in mesh (6) intermesh with each other, and a plurality of unidirectional yarns (10, 12, 14, 16, 18, 20), wherein the mesh (6) warpwise extending courses (A, B, C, D, E) form and between each two adjacent courses (A, B, C, D, E) a mesh channel (M1, M2, M3) is formed, and at least two unidirectional yarns (10, 12, 14, 16, 18, 20) in a mesh channel (M1, M2, M3) binding technically included, rotation or interlacing of the at least two unidirectional yarns (10, 12, 14, 16, 18, 20) is prevented.

US2016160457 - Light-weight temporary bridge system and building method thereof

NATIONAL APPLIED RESEARCH LABORATORIES

Published 2016-06-09



A light-weight temporary bridge system includes a weight balance structure-module, constructed at a first abutment; a bridge tower structure-module, including a bottom part fixed to the weight balance structure-module and a top part coupled to the weight balance structure-module via at least one first cable; and a crossing structure-module constructed between the first abutment and a second abutment, coupled to the weight balance structure-module and coupled to the top part of the bridge tower structure-module via at least one second cable.

WO2016073453 - Reinforced engineered biomaterials and methods of manufacture thereof

MODERN MEADOW

Published 2016-05-12

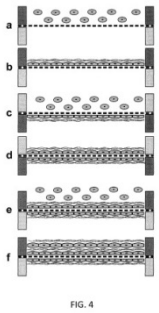


FIG. 4

Reinforced engineered biomaterials, and methods of making them, may be useful to form engineered leathers.

Such engineered hides may be reinforced by encapsulating, and/or cross-linking to, a mesh and/or scaffold material, which may be a synthetic polymeric material.

The resulting hide may include a stratified structure in which the mesh is held between layers of collagen-dense regions, where the collagen-dense regions overlaying the mesh following the contour of the mesh.

Alternatively or additionally, the resulting hide may be a composite of a fibrous matrix that has been tanned to allow crosslinking of the fibrous matrix to the collagen formed by cultured cells.

These engineered leathers may be referred to as fiber-reinforced biological tissue composites.

The resulting materials may have superior durability and flexibility compared to other engineered materials and native leather, while retaining the look and feel of native leather.

DE102014113218 - Aircraft fuselage and wings with struts

AIRBUS

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The invention relates to an aircraft having a fuselage and wings connected thereto, wherein a support strut extends in each case between the fuselage and the wings, said support strut being connected both to the fuselage and the wing.

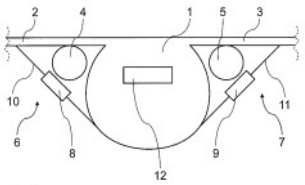

Fig. 1

The support strut comprises a hydraulic working cylinder that can be subjected with hydraulic fluid for pivoting the wing in a controlled manner.

DE102014100382 - A wind power plant for water or rotor

ERKA TECHNIK

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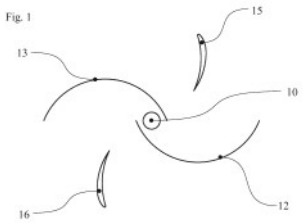
The aim of the invention is to provide a rotor which is simple, efficient, and suitable for use in small wind turbines or hydroelectric power plants.



This is achieved by a rotor which comprises the following: - an axis of rotation; - a first curved main blade with a first concave front surface; and - a second main blade with a second concave front surface, said second main blade being identical to the first main blade in particular and being held and aligned axially symmetrical to the first main blade with respect to the axis of rotation.

The invention is characterized by a first front blade on the face facing the concave surface of the first main blade; and a second front blade, which is identical to the first front blade in particular, on the face facing the concave surface of the second main blade.