

Title (en)
FIBRE COMPOSITE COMPONENT ACTING AS AN ACTUATOR, A SENSOR AND/OR A GENERATOR AND METHOD FOR THE PRODUCTION THEREOF

Title (de)
AKTORISCHES, SENSORISCHES UND/ODER GENERATORISCHES FASERVERBUNDBAUTEIL UND VERFAHREN ZU SEINER HERSTELLUNG

Title (fr)
ÉLÉMENT COMPOSITE RENFORCÉ PAR DES FIBRES À EFFET ACTIONNEUR, DÉTECTEUR ET/OU GÉNÉRATEUR ET SON PROCÉDÉ DE FABRICATION

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Abstract (en)
[origin: WO2011134462A2] The invention relates to fibre composite components acting as an actuator, a sensor and/or a generator, and to a method for the production thereof. The aim of the invention is to provide such fibre composite components that can be easily and reliably produced, and in which elements acting as an actuator, a generator and/or a sensor are securely fixed and precisely positioned. In a fibre composite component according to the invention, at least one piezoelectric element is fixed and positioned inside a fibrous structure by fibres or thread or fixed to a fibrous structure and positioned therein by means of fibres or thread. Flexible electroconductive connections that can be contacted from outside the fibre composite compound are guided on and/or inside the fibrous structure to electrical connection contacts of the at least one piezoelectric element. At least one piezoelectric element, electroconductive compounds and the fibrous structure are embedded in a matrix material.

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BRYAN J. CANNON, DIANN BREI: "Piezoceramic Hollow Fiber Active Composites", 43RD AIAA/ASME/AHS/ASC STRUCTURES, STRUCTURAL DYNAMICS AND MATERIALS CON, no. AIAA 2002-1357, 22 April 2002 (2002-04-22) - 25 April 2002 (2002-04-25), Denver, Colorado, USA, pages 1 - 17

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