

Title (en)

SENSORS INCORPORATED INTO SEMI-RIGID STRUCTURAL MEMBERS TO DETECT PHYSICAL CHARACTERISTIC CHANGES

Title (de)

IN HALBSTARRE STRUKTURELEMENTE INTEGRIERTE SENSOREN ZUR ERKENNUNG VON ÄNDERUNGEN PHYSIKALISCHER EIGENSCHAFTEN

Title (fr)

CAPTEURS INCORPORÉS DANS DES ÉLÉMENTS STRUCTURAUX SEMI-RIGIDES POUR DÉTECTER DES CHANGEMENTS DE CARACTÉRISTIQUES PHYSIQUES

Publication

EP 4399106 A1 20240717 (EN)

Application

EP 22868142 A 20220909

Priority

- US 202163242270 P 20210909
- US 202163247680 P 20210923
- US 202163276274 P 20211105
- US 202163281846 P 20211122
- US 202217940227 A 20220908
- US 202217940240 A 20220908
- US 202217940246 A 20220908
- US 202217940256 A 20220908
- US 2022043125 W 20220909

Abstract (en)

[origin: WO2023039204A1] A disclosed vehicle component may include at least one split-ring resonator, which may be embedded within a material. The split ring resonator may be formed from a three-dimensional (3D) monolithic carbonaceous growth and may detect an electromagnetic ping emitted from a user device. The split ring resonator may generate an electromagnetic return signal in response to the electromagnetic ping. The electromagnetic return signal may indicate a state of the material in a position proximate to a respective split ring resonator. In some aspects, the split-ring resonator may resonate at a first frequency in response to the electromagnetic ping when the material is in a first state, and may resonate at a second frequency in response to the electromagnetic ping when the material is in a second state. A resonant frequency of the 3D monolithic carbonaceous growth may be based on physical characteristics of the material.

IPC 8 full level

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