

Title (en)

METHOD AND APPARATUS FOR DETECTING ELECTRICALLY CONDUCTIVE FOREIGN BODIES DURING INDUCTIVE ENERGY TRANSMISSION

Title (de)

VERFAHREN UND VORRICHTUNG ZUR DETEKTION VON ELEKTRISCH LEITFÄHIGEN FREMDKÖRPERN BEI DER INDUKTIVEN ENERGIEÜBERTRAGUNG

Title (fr)

PROCÉDÉ ET DISPOSITIF DE DÉTECTION DE CORPS ÉTRANGERS ÉLECTRIQUEMENT CONDUCTEURS LORS DE LA TRANSMISSION D'ÉNERGIE INDUCTIVE

Publication

EP 3900153 A1 20211027 (DE)

Application

EP 18833421 A 20181220

Priority

EP 2018086201 W 20181220

Abstract (en)

[origin: WO2020125994A1] In a method and an apparatus for detecting electrically conductive foreign bodies during inductive energy transmission between a primary coil (1) and a secondary coil (2), at least one sensor coil (5) is arranged between the primary coil (1) and the secondary coil (2), and a current flowing in the sensor coil (5) due to the induced voltage during the energy transmission is detected and evaluated. In this case, the sensor coil (5) is connected to at least one capacitor to form a resonant circuit which is matched to the excitation frequency of the primary coil (1). The phase position of the current in the resonant circuit in relation to a reference signal is then used to determine whether there are electrically conductive foreign bodies (4) between the primary coil (1) and the secondary coil (2). A high degree of sensitivity in relation to small electrically conductive foreign bodies within the energy transmission path is also achieved by means of the method and the apparatus.

IPC 8 full level

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CPC (source: EP US)

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