Title (en)

Cast iron component with integrated function elements

Title (de)

Gussbauteil mit integrierten Funktionselementen

Title (fr)

Composant coulé doté d'éléments de fonction intégrés

Publication

EP 2025433 A2 20090218 (DE)

Application

EP 08019322 A 20051010

Priority

- EP 05022013 A 20051010
- DE 102004049353 A 20041008
- DE 102005018936 A 20050422

Abstract (en)

The metal component (1) produced by a casting process useful in engine blocks or traveling mechanism, comprises functional elements (2), which are molded into the component and completely surrounded up to a dielectric column by shedded metal. The dielectric column extends itself between the functional element and a surface of the component. The functional element has electronic component for a wireless transmission through infrared or radio, and electronic component groups for the transmission of optical or inductive signals. The metal component (1) produced by a casting process useful in engine blocks or traveling mechanism, comprises functional elements (2), which are molded into the component and completely surrounded up to a dielectric column by shedded metal. The dielectric column extends itself between the functional element and a surface of the component. The functional element has electronic component for a wireless transmission through infrared or radio, and electronic component groups for the transmission of optical or inductive signals. The functional element is indented for component identification or comprises intelligent components with integrated data recording, processing and controlling. A thermally isolating protection layer or the remainder of the thermally isolating protection layer is present partially between the functional element and the shedded metal. The protection layer consists of a plastic, ceramics or low melted metal alloy.

Abstract (de)

Die vorliegende Erfindung betrifft die Herstellung eines Gussbauteils mit integrierten Funktionselementen, wobei das Funktionselement (2) als RFID ausgebildet ist oder elektronische Komponenten für eine drahtlose Übertragung durch Infrarot oder Funk aufweist, das in das Bauteil (1) eingegossene Funktionselement (2) vollständig bis auf einen dielektrischen Spalt (3) vom vergossenen Metall umgeben ist und der dielektrische Spalt (3) sich zwischen dem Funktionselement (2) und einer Bauteiloberfläche des Bauteils (1) erstreckt.

IPC 8 full level

B22D 19/00 (2006.01)

CPC (source: EP)

B22D 19/0081 (2013.01); **B22D 19/04** (2013.01)

Citation (applicant)

- REMOTE IDENTIFICATION OF METAL CASTINGS, vol. 106, no. 98-044, pages 605 - 608
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Designated contracting state (EPC)

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DOCDB simple family (publication)

EP 1645350 A1 20060412; **EP 1645350 B1 20090617**; AT E433811 T1 20090715; DE 102005018936 A1 20060420; DE 202005021246 U1 20070823; DE 502005007494 D1 20090730; DK 1645350 T3 20091012; EP 2025433 A2 20090218; EP 2025433 A3 20090805; EP 2025433 B1 20120822; PL 1645350 T3 20091130; PL 2025433 T3 20121231; SI 1645350 T1 20091031

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