

Title (en)

Substrate comprising magnetic particles, security document and method for detecting them

Title (de)

Substrat enthaltend magnetische Partikeln, Sicherheitsdokument und Verfahren zu deren Detektion

Title (fr)

Substrat comprenant des particules magnétiques, documents de sécurité et procédé de leur détection

Publication

EP 0848356 A1 19980617 (EN)

Application

EP 96402721 A 19961212

Priority

EP 96402721 A 19961212

Abstract (en)

A method for detecting the presence of magnetic particles in a substrate the base material of which has magnetic properties substantially differing from the corresponding magnetic properties of the particles. The particles have such a long and thin form that their demagnetisation factor N is smaller than 1250, they have a diameter smaller than 30 micrometer and a magnetic saturation field ranging from 100 to 1000 A/m. The method comprising following steps : (a) emitting an electromagnetic source signal of one or more particular base frequencies to said substrate so that any present magnetic particles go into a non-linear part of their B-H curve for at least part of a cycle of the source signal ; (b) detecting an electromagnetic detection signal emanating from said substrate ; (c) testing the detection signal for the presence of particular higher harmonics of said base frequencies or of any linear combination of said base frequencies, said particular higher harmonics being indicative of the presence of said magnetic particles. <IMAGE>

IPC 1-7

G07D 7/00; **G07F 7/08**

IPC 8 full level

G07D 7/04 (2016.01); **G07F 7/08** (2006.01)

CPC (source: EP US)

G07D 7/04 (2013.01 - EP US); **G07F 7/08** (2013.01 - EP)

Citation (applicant)

- US 4114032 A 19780912 - BROSON JORGEN, et al
- US 4218674 A 19800819 - BROSON JORGEN [AU], et al
- EP 0625766 A2 19941123 - NHK SPRING CO LTD [JP]
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Citation (search report)

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- [AD] US 4114032 A 19780912 - BROSON JORGEN, et al
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- [AD] EP 0632398 A2 19950104 - NHK SPRING CO LTD [JP]
- [AD] EP 0625766 A2 19941123 - NHK SPRING CO LTD [JP]
- [AD] WO 9524000 A1 19950908 - BEKAERT SA NV [BE]

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