

Title (en)

Electromagnetic trip with amorphous carbon film and his method of manufacturing

Title (de)

Elektromagnetischen Auslöser mit einer amorphen Kohlenstoffbeschichtung und sein Fertigungsverfahren

Title (fr)

Relais de déclenchement électromagnétique à revêtement de carbone amorphe, et son procédé de fabrication

Publication

EP 0838830 B1 20040121 (FR)

Application

EP 97410111 A 19971007

Priority

FR 9613143 A 19961023

Abstract (en)

[origin: EP0838830A1] The surfaces (10, 14) of the core (1) and of the armature (8) are finished to give a coefficient of roughness between 0.03 and 0.05 μm , defined as the mean height of the profile above and below the mean line. The peaks between the surfaces ensure point contact and the surfaces are covered in a layer of amorphous carbon of thickness less than 1 μm . The DLC diamond layer comprises a mixture of sp^2 and sp^3 hybrids giving a Vickers hardness between 30 and 70 GPa and a coefficient of friction of about 0.1 for a load of 5 N. The enrichment of this layer is by the physical or chemical deposition under vacuum of specific elements, notably fluorine, boron, silicon or nitrogen.

IPC 1-7

H01H 71/32

IPC 8 full level

H01H 71/32 (2006.01)

CPC (source: EP)

H01H 71/327 (2013.01)

Cited by

DE10210826A1; DE102004016950B3; EA008953B1

Designated contracting state (EPC)

CH DE ES GB IT LI

DOCDB simple family (publication)

EP 0838830 A1 19980429; EP 0838830 B1 20040121; DE 69727278 D1 20040226; DE 69727278 T2 20041209; ES 2213811 T3 20040901; FR 2754933 A1 19980424; FR 2754933 B1 19981127

DOCDB simple family (application)

EP 97410111 A 19971007; DE 69727278 T 19971007; ES 97410111 T 19971007; FR 9613143 A 19961023