

Title (en)

MATERIAL FOR SLIDING PARTS HAVING SELF-LUBRICITY AND WIRE MATERIAL FOR PISTON RING

Title (de)

MATERIAL FÜR GLEITBAUTEILE MIT SELBSTSCHMIERUNG UND DRAHTMATERIAL FÜR KOLBENRING

Title (fr)

MATERIAU POUR PIECES COULISSANTES AUTO-LUBRIFIANTES ET MATERIAU EN FIL POUR SEGMENT DE PISTON

Publication

EP 1529852 B1 20081231 (EN)

Application

EP 03761840 A 20030630

Priority

- JP 0308309 W 20030630
- JP 2002191722 A 20020701

Abstract (en)

[origin: EP1529852A1] A material for use as self-lubricating sliding parts, which consists of a steel containing, by mass, from not less than 0.4 % to less than 1.5 % of C (carbon), 0.1 to 3.0 % of Si, 0.1 to 3.0 % of Mn, from inclusive zero to 0.5 % of Cr, 0.05 to 3.0 % of Ni, 0.3 to 2.0 % of Al, 0.3 to 20 % in total (Mo + W + V) of at least one element selected from the group consisting of Mo, W (tungsten) and V (vanadium), and 0.05 to 3.0 % of Cu, wherein there can be observed graphite particles having an average particle size of not more than 3 μ m in a section of the metal structure of the steel. The steel is also used as piston rings. In the steel, the graphite particles observed in the structural section occupy an area rate of not less than 1 % in the overall area of the structural section, and have an average particle size of not more than 3 μ m. The steel may further contain not more than 0.3 % of S and/or not more than 0.01 % of Ca. The steel is subjected to nitriding treatment for use. <IMAGE>

IPC 8 full level

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CPC (source: EP KR US)

C22C 1/00 (2013.01 - KR); **C22C 38/02** (2013.01 - EP KR US); **C22C 38/04** (2013.01 - EP KR US); **C22C 38/06** (2013.01 - EP KR US); **C22C 38/08** (2013.01 - EP KR US); **C22C 38/12** (2013.01 - EP KR US); **C22C 38/34** (2013.01 - EP KR US); **C22C 38/44** (2013.01 - EP KR US); **C22C 38/58** (2013.01 - EP KR US); **C22C 38/60** (2013.01 - EP KR US)

Cited by

WO2010069020A3; WO2008091214A1; WO2015117208A1; US8540934B2; US9238856B2

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