

Title (en)
PISTON RING

Title (de)
KOLBENRING

Title (fr)
SEGMENT DE PISTON

Publication
EP 2401532 B1 20170816 (DE)

Application
EP 09744325 A 20091013

Priority
• EP 2009007355 W 20091013
• DE 102009010727 A 20090226

Abstract (en)
[origin: WO2010097105A1] The invention relates to a steel material composition, in particular for producing piston rings and cylinder sleeves, containing the following elements in the given fractions in relation to 100 % by weight of the steel material: 0.5 - 1.2 % by weight C, 2.0 - 20.0 % by weight Cr, 49.0 - 97.1 % by weight Fe, 0.1 - 3.0 % by weight Mn, 0.1 - 3.0 % by weight Mo, 0 - 7.0 % by weight Nb, 2.0 - 10.0 % by weight Si, 0 - 7.0 % by weight Ti, 0 - 7.0 % by weight V and 0 - 0.5 % by weight W, the sum of the fractions of Nb, Ti, V and W being 2.0 - 7.0 % by weight. Said composition can be produced by melting the starting materials and casting the melt in a pre-fabricated mould.

IPC 8 full level
F16J 9/26 (2006.01); **C22C 38/22** (2006.01); **C22C 38/24** (2006.01); **C22C 38/26** (2006.01); **C22C 38/28** (2006.01); **C22C 38/34** (2006.01)

CPC (source: EP US)
C22C 38/22 (2013.01 - EP US); **C22C 38/24** (2013.01 - EP US); **C22C 38/26** (2013.01 - EP US); **C22C 38/28** (2013.01 - EP US); **C22C 38/34** (2013.01 - EP US)

Designated contracting state (EPC)
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO SE SI SK SM TR

DOCDB simple family (publication)
WO 2010097105 A1 20100902; BR PI0921528 A2 20160315; CN 102272490 A 20111207; CN 102272490 B 20141015; DE 102009010727 B3 20110113; EP 2401532 A1 20120104; EP 2401532 B1 20170816; JP 2012518764 A 20120816; JP 5497798 B2 20140521; KR 20110128269 A 20111129; PT 2401532 T 20171017; US 2011311391 A1 20111222; US 8506727 B2 20130813

DOCDB simple family (application)
EP 2009007355 W 20091013; BR PI0921528 A 20091013; CN 200980155138 A 20091013; DE 102009010727 A 20090226; EP 09744325 A 20091013; JP 2011551412 A 20091013; KR 20117015156 A 20091013; PT 09744325 T 20091013; US 200913203580 A 20091013