

Title (en)
PISTON OF TWO-PIECE CONSTRUCTION FOR AN INTERNAL COMBUSTION ENGINE

Title (de)
ZWEITEILIG AUFGEBAUTER KOLBEN EINER BRENNKRAFTMASCHINE

Title (fr)
PISTON EN DEUX PARTIES POUR MOTEUR À COMBUSTION INTERNE

Publication
EP 2900992 A1 20150805 (DE)

Application
EP 13763077 A 20130918

Priority
• DE 102012217599 A 20120927
• EP 2013069368 W 20130918

Abstract (en)
[origin: WO2014048810A1] The invention relates to a piston (1) for an internal combustion engine, configured as a gallery-cooled piston of two-piece construction which comprises a main body (2) and a ring element (3). The ring element (2) which has a ring zone (18) and a fire land (17) encloses a cooling gallery (15) on the outside, which cooling gallery (15) is delimited on the inside by an intermediate wall (16) which separates the cooling gallery (15) from a combustion-chamber recess (12) which is made in a piston head (10) of the main body (2). The main body (2) and the ring element (3) together form two circumferential dividing planes (4a, 5a) which are offset with respect to one another, to which end in each case two interacting joining webs (6a, 6b; 7a, 7b) of the ring element (3) and of the main body (2) are connected with a material-to-material bond.

IPC 8 full level
F02F 3/00 (2006.01); **F02F 3/22** (2006.01)

CPC (source: CN EP US)
F01P 3/06 (2013.01 - US); **F02F 3/003** (2013.01 - CN EP US); **F02F 3/18** (2013.01 - US); **F02F 3/22** (2013.01 - CN EP US); **F02F 2003/0053** (2013.01 - US); **F02F 2003/0061** (2013.01 - CN EP US); **Y10T 29/49252** (2015.01 - EP US)

Citation (examination)
• US 2012222632 A1 20120906 - SCHARP RAINER [DE]
• JP 2007270813 A 20071018 - YAMAHA MOTOR CO LTD
• US 2012037111 A1 20120216 - SCHARP RAINER [DE], et al
• WO 2013083342 A1 20130613 - KS KOLBENSCHMIDT GMBH [DE]
• WO 2013167105 A1 20131114 - MAHLE INT GMBH [DE]

Designated contracting state (EPC)
AL 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 RS SE SI SK SM TR

Designated extension state (EPC)
BA ME

DOCDB simple family (publication)
DE 102013218709 A1 20140327; BR 112015005723 A2 20170704; CN 104662277 A 20150527; CN 104662277 B 20190618; EP 2900992 A1 20150805; MX 2015003487 A 20150925; US 2015226151 A1 20150813; US 2017328302 A1 20171116; WO 2014048810 A1 20140403

DOCDB simple family (application)
DE 102013218709 A 20130918; BR 112015005723 A 20130918; CN 201380049820 A 20130918; EP 13763077 A 20130918; EP 2013069368 W 20130918; MX 2015003487 A 20130918; US 201314431635 A 20130918; US 201715616104 A 20170607