Title (en)

PARTICLE FILTER FOR AN INTERNAL COMBUSTION ENGINE

Title (de)

PARTIKELFILTER FÜR EINE VERBRENNUNGSKRAFTMASCHINE

Title (fr)

FILTRE À PARTICULES POUR MOTEUR À COMBUSTION INTERNE

Publication

EP 3472441 B1 20201230 (DE)

Application

EP 17729016 A 20170607

Priority

- DE 102016110527 A 20160608
- EP 2017025162 W 20170607

Abstract (en)

[origin: WO2017211468A1] The invention relates to a particle filter for an internal combustion engine, comprising a filter body (2), wherein the filter body (2) has a flow-through filter inlet (3) and a flow-through filter outlet (4), and wherein the filter body (2) has at least one flow-through first channel (5) with a first end (7) formed facing the filter inlet (3) and with a second end (8) formed facing the filter outlet (4), and has a flow-through second channel (6) with a third end (9) formed facing the filter inlet (3) and with a fourth end (10) formed facing the filter outlet (4), and wherein the second end (8) and the third end (9) are designed such that they cannot be flown through, wherein the channels (5, 6) can be divided into a flow-through channel section (13) and a non-flow-through channel section (14), and wherein a flow transfer of an exhaust gas flowing through the filter body (2) coming from the first channel (5) into the second channel (6) occurs via a common channel wall (11) formed between the first channel (5) and the second channel (6), and wherein the channel wall (11) is designed such that soot particles can be separated from the exhaust gas. According to the invention, in order to increase a reaction temperature in the particle filter (1) for burning off the soot particles, the first channel (5) and/or the second channel (6) has a heating element (15), wherein the heating element (15) is arranged in the non-flow-through channel section (14) of the channel (5; 6).

IPC 8 full level

F01N 3/021 (2006.01); **F01N 3/023** (2006.01); **F01N 3/027** (2006.01); **F01N 3/035** (2006.01); **F01N 3/08** (2006.01)

CPC (source: EP KR US)

F01N 3/021 (2013.01 - EP US); **F01N 3/023** (2013.01 - EP US); **F01N 3/027** (2013.01 - EP KR US); **F01N 3/035** (2013.01 - EP KR US); **F01N 3/0821** (2013.01 - EP KR US); **F01N 3/0828** (2013.01 - EP US); **F01N 3/0864** (2013.01 - EP KR US); F01N 2430/06 (2013.01 - EP KR US); F01N 2590/11 (2013.01 - EP KR US)

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

DOCDB simple family (publication)

DE 102016110527 A1 20171214; CN 109312648 A 20190205; CN 109312648 B 20210129; EP 3472441 A1 20190424; EP 3472441 B1 20201230; JP 2019523842 A 20190829; JP 6720351 B2 20200708; KR 102139222 B1 20200729; KR 20190015480 A 20190213; US 2019153920 A1 20190523; WO 2017211468 A1 20171214

DOCDB simple family (application)

DE 102016110527 A 20160608; CN 201780036131 A 20170607; EP 17729016 A 20170607; EP 2017025162 W 20170607; JP 2018564194 A 20170607; KR 20197000134 A 20170607; US 201716308583 A 20170607