Title (en)

SPARK PLUG FOR A HIGH-FREQUENCY IGNITION SYSTEM

Title (de)

ZÜNDKERZE FÜR EINE HOCHFREQUENZ-ZÜNDANLAGE

Title (fr)

BOUGIE D'ALLUMAGE POUR SYSTÈME D'ALLUMAGE À HAUTE FRÉQUENCE

Publication

EP 3465849 A1 20190410 (DE)

Application

EP 17721523 A 20170411

Priority

- DE 102016006350 A 20160523
- EP 2017000480 W 20170411

Abstract (en)

[origin: WO2017202482A1] The invention relates to a spark plug (100) for an internal combustion engine, in particular comprising a high-frequency ignition system, having a central electrode (28; 128), an earth electrode (12; 112), and an electrical insulator (18; 118) which is arranged between the central electrode (28; 128) and the earth electrode (12; 112), wherein a central electrode connection point (26; 126) for electrically connecting the central electrode (28; 128) to an ignition system is provided on the insulator (18; 118), wherein the central electrode (28; 128) and the earth electrode (12; 112) protrude beyond the insulator (18; 118) at an axial end (114) of the spark plug (100) and each form, with a part which axially protrudes beyond the insulator (18; 118), a central electrode end (140) and an earth electrode end (142), wherein the central electrode end (140) and the earth electrode end (142) are arranged and formed in such a way that an axial region (170) of a gap (146) is formed between said ends in the axial direction, wherein the axial region (170) of the gap (146) is at a distance from the insulator (18; 118), wherein at least one additional electrode (150) is provided, which protrudes beyond the insulator (118) at the axial end (114) of the spark plug (100) and, with a part which axially protrudes beyond the insulator (118), forms an additional electrode end (154). Here, the additional electrode (150) is arranged on the spark plug (100) in a manner electrically insulated from the earth electrode (112) and the central electrode (128), wherein the additional electrode end (154) protrudes into the axial region (170) of the gap (146) between the central electrode end (140) and the earth electrode end (142) or is arranged in a region (170) of the gap (146) which is radially adjacent to the axial region (170) of the gap (146) and as a result splits the gap (146) into two ignition spark sections (156, 166).

IPC 8 full level

H01T 13/22 (2006.01); **H01T 13/46** (2006.01); **H01T 13/50** (2006.01)

CPC (source: CN EP KR US)

H01T 13/22 (2013.01 - CN EP KR US); **H01T 13/46** (2013.01 - CN EP KR); **H01T 13/462** (2013.01 - EP KR US); **H01T 13/50** (2013.01 - CN EP KR)

Citation (search report)

See references of WO 2017202482A1

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 102016006350 A1 20171123; CN 109155503 A 20190104; CN 109155503 B 20210406; CN 113054535 A 20210629; CN 113054535 B 20221101; EP 3465849 A1 20190410; EP 3465849 B1 20200212; JP 2019517117 A 20190620; KR 102141752 B1 20200806; KR 20190008238 A 20190123; TW 201742343 A 20171201; US 10971902 B2 20210406; US 2020235552 A1 20200723; WO 2017202482 A1 20171130

DOCDB simple family (application)

DE 102016006350 A 20160523; CN 201780032356 A 20170411; CN 202110295217 A 20170411; EP 17721523 A 20170411; EP 2017000480 W 20170411; JP 2018562018 A 20170411; KR 20187033197 A 20170411; TW 106116908 A 20170522; US 201716304056 A 20170411