

Title (en)  
NOZZLE FOR A PLASMA ARC TORCH

Title (de)  
DÜSE FÜR PLASMALICHTBOGENBRENNER

Title (fr)  
BUSE POUR TORCHE A ARC PLASMA

Publication  
**EP 3054749 A1 20160810 (DE)**

Application  
**EP 15159816 A 20150319**

Priority  
DE 102015101532 A 20150203

Abstract (en)  
[origin: CA3194415A1] Nozzles for a liquid-cooled plasma arc torch head, and an assembly of a nozzle holder and such a nozzle and plasma arc torch head, and a plasma arc torch with the same.

Abstract (de)  
Düsen für einen flüssigkeitsgekühlten Plasmalichtbogenbrennerkopf, sowie Anordnung aus einem Düsenhalter und einer derartigen Düse und Plasmalichtbogenbrennerkopf sowie Plasmalichtbogenbrenner mit derselben/denselben.

IPC 8 full level  
**H05H 1/34** (2006.01)

CPC (source: CN EP KR RU US)  
**H05H 1/28** (2013.01 - KR); **H05H 1/34** (2013.01 - CN EP KR RU US); **H05H 1/3478** (2021.05 - CN EP KR); **H05H 1/28** (2013.01 - US); **H05H 1/3478** (2021.05 - US)

Citation (applicant)  
• DE 102009006132 B4 20101216 - KJELLBERG FINSTERWALDE PLASMA [DE]  
• DE 102007005316 B4 20091203 - KJELLBERG FINSTERWALDE PLASMA [DE]

Citation (search report)  
• [XYI] DE 102008018530 A1 20091015 - KJELLBERG FINSTERWALDE PLASMA [DE]  
• [Y] EP 2175702 A1 20100414 - KJELLBERG FINSTERWALDE PLASMA [DE]  
• [A] DE 102009060849 A1 20110707 - KJELLBERG FINSTERWALDE PLASMA & MASCHINEN 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)  
**EP 3054749 A1 20160810; EP 3054749 B1 20210421**; BR 112017016526 A2 20180410; BR 112017016526 B1 20231114; CA 2975533 A1 20160811; CA 3194415 A1 20160811; CN 107750475 A 20180302; CN 107750475 B 20201211; DE 102015101532 A1 20160804; DK 3054749 T3 20210628; ES 2874902 T3 20211105; HR P20211108 T1 20211015; HR P20211108 T8 20220107; HU E055588 T2 20211228; JP 2018508949 A 20180329; JP 6727731 B2 20200722; KR 102528323 B1 20230503; KR 20170134347 A 20171206; MX 2017010081 A 20180307; PL 3054749 T3 20211025; PT 3054749 T 20210528; RU 2017130947 A 20190304; RU 2017130947 A3 20190621; RU 2707499 C2 20191127; SI 3054749 T1 20211231; US 10582606 B2 20200303; US 2018020533 A1 20180118; WO 2016124463 A1 20160811

DOCDB simple family (application)  
**EP 15159816 A 20150319**; BR 112017016526 A 20160127; CA 2975533 A 20160127; CA 3194415 A 20160127; CN 201680019083 A 20160127; DE 102015101532 A 20150203; DK 15159816 T 20150319; EP 2016051689 W 20160127; ES 15159816 T 20150319; HR P20211108 T 20150319; HU E15159816 A 20150319; JP 2017541023 A 20160127; KR 20177024734 A 20160127; MX 2017010081 A 20160127; PL 15159816 T 20150319; PT 15159816 T 20150319; RU 2017130947 A 20160127; SI 201531661 T 20150319; US 201615548434 A 20160127