

Title (en)  
Plasma torch with transferred arc

Title (de)  
Plasmabrenner für übertragenen Lichtbogen

Title (fr)  
Torche à plasma à arc transféré

Publication  
**EP 0465941 B1 19970423 (DE)**

Application  
**EP 91110640 A 19910627**

Priority  
DE 4022111 A 19900711

Abstract (en)  
[origin: EP0465941A2] The present plasma torch has a central electrode (10), a nozzle end piece (11) concentric thereto and a concentric torch jacket (73). There is an annular gap (27) for the passage of plasma gas between the electrode (10) and the nozzle end piece (11), and there is an annular channel (75, 76) between the nozzle end piece (11) and the torch jacket (73), the inner wall of which annular channel (75, 76) is partially formed by means of an insulating tube (36, 39) which electrically isolates the two parts (11, 73). <??>In order that this plasma torch can also be operated in particular using alternating current, largely without the risk of forming parasitic arcs, the annular channel (75, 76) is drawn back between the nozzle end piece (11) and the torch jacket (73) at least to the level of the coolant inlet and outlet (61, 62) of the torch jacket (73). At its rearward end, the annular channel (75) is in line connection (55) with a source (56) of a pressurised, gaseous medium. Such a torch is safe in operation even in an atmosphere having electrically conductive particles, such as metallic or foundry dusts and achieves long lives.

IPC 1-7  
**H05H 1/34**

IPC 8 full level  
**B23K 10/00** (2006.01); **H05H 1/28** (2006.01); **H05H 1/34** (2006.01)

CPC (source: EP KR US)  
**H05H 1/28** (2013.01 - EP KR US); **H05H 1/34** (2013.01 - EP US); **H05H 1/3431** (2021.05 - KR)

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