

Title (en)

Plasma torch head and plasma torch equipped with it

Title (de)

Plasmabrennerkopf und diesen enthaltender Plasmabrenner

Title (fr)

Tête de torche à plasma et torche à plasma la comportant

Publication

EP 0750449 B1 19990804 (FR)

Application

EP 96401365 A 19960620

Priority

FR 9507608 A 19950623

Abstract (en)

[origin: EP0750449A1] The plasma torch head incorporates an axial electrode (10) with a flat end face (16) associated with a peripheral tuyere (12) in the shape of a small dish. The bottom (20) of the tuyere (12) incorporates an axial conduit (22) for the injection of the plasma jet, and its lateral wall (24) surrounds the electrode (10) and delimits with it a supply space (26) that is essentially annular. The torch head incorporates means (38) for discharging a plasmagenic gas into the annular supply space (26) in a direction that is essentially axial. The end face (16) of the electrode (10) delimits with the bottom (20) of the tuyere (12) an annular gap (29) for laminating the discharge of plasmagenic gas. The plasma torch head may present one or more particular characteristics defining specific relationships in its construction, notably the cross-sections of various parts of the head. Also claimed is the plasma torch incorporating this head, notably interchangeably. Use of the head to cut a 5 mm thick steel slab produced a relief angle of about 0 degrees 10' to 0 degrees 30', compared to 1 to 15 degrees , and a rugosity of 2 microns compared to 50 microns for a classical torch head, with both producing a burr height of APPROX 0.03 mm.

IPC 1-7

H05H 1/34; B23K 9/29

IPC 8 full level

H05H 1/34 (2006.01)

CPC (source: EP US)

H05H 1/34 (2013.01 - EP US); **H05H 1/3442** (2021.05 - EP); **H05H 1/3478** (2021.05 - EP); **H05H 1/3484** (2021.05 - EP);
H05H 1/3442 (2021.05 - US); **H05H 1/3478** (2021.05 - US); **H05H 1/3484** (2021.05 - US)

Cited by

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