

Title (en)

SWIRLER FOR PLASMA CUTTING TORCHES

Title (de)

DRALLERZEUGER FÜR PLASMA-SCHNEIDBRENNER

Title (fr)

DIFFUSEUR POUR TORCHES A DECOUPAGE PLASMA

Publication

EP 2375875 A1 20111012 (EN)

Application

EP 11161871 A 20110411

Priority

IT BO20100223 A 20100412

Abstract (en)

A diffuser (200) for a plasma cutting torch comprises a substantially annular main body (201) with a main axis (X), an annular lower wall (204), an annular upper wall (205) and a cylindrical outer lateral wall (206) and at least one channel (207) for the passage of gas; the channel (207) having an inlet (207a) located on the outer lateral surface (206) and an outlet (207b) positioned at the annular lower wall (204) and an axis (A) of extension which is slanting relative to the main axis (X) ; the projection of the axis (A) of the channel (207) in a plane "at" forming, with the axis (a), an angle (\hat{O}) in a Cartesian reference system whose centre lies at (O), with an axis (a) parallel with the main axis (X), an axis (r) in a radial direction and an axis (t) perpendicular to the axes (a) and (r); the angle (\hat{O}) is sized so as to impart to the velocity versor of the gas exiting the channel (207) an axial component "Vass" and a tangential component "Vtan" in such a way that the ratio between the axial component "Vass" and the tangential component "Vtan" is between 0.27 and 0.70, that is to say: $0.27 \leq \frac{V_{ass}}{V_{tan}} \leq 0.70$.

IPC 8 full level

H05H 1/34 (2006.01)

CPC (source: EP US)

H05H 1/34 (2013.01 - EP US); **H05H 1/3468** (2021.05 - EP); **H05H 1/3478** (2021.05 - EP)

Citation (applicant)

- US 5734143 A 19980331 - KAWASE TORU [JP], et al
- US 2007284340 A1 20071213 - JORGENSEN MORTEN [US]

Citation (search report)

- [I] US 5734143 A 19980331 - KAWASE TORU [JP], et al
- [I] US 2007284340 A1 20071213 - JORGENSEN MORTEN [US]
- [A] US 5170033 A 19921208 - COUCH JR RICHARD W [US], et al

Cited by

WO2018229308A3

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 2375875 A1 20111012; **EP 2375875 B1 20160727**; IT 1399441 B1 20130419; IT BO20100223 A1 20111013; PL 2375875 T3 20170131

DOCDB simple family (application)

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