

Title (en)

ASYMETRIC CONSUMABLES FOR A PLASMA ARC TORCH

Title (de)

ASYMMETRISCHE VERBRAUCHSMATERIALIEN FÜR EINEN PLASMALICHTBOGENBRENNER

Title (fr)

CONSOMMABLES ASYMÉTRIQUES POUR TORCHE À PLASMA D'ARC

Publication

EP 4319490 A3 20240612 (EN)

Application

EP 23216683 A 20171205

Priority

- US 201662430108 P 20161205
- US 201715685659 A 20170824
- EP 17817619 A 20171205
- US 2017064691 W 20171205

Abstract (en)

A torch tip assembly of a plasma arc torch is provided for delivering a diffused stream of plasma arc in a gouging operation. The assembly comprises a nozzle including a nozzle body defining a central longitudinal axis extending between a proximal end and a distal end. A nozzle exit orifice of the nozzle body defines at least a bore for conducting the plasma arc therethrough. The assembly also comprises a counter bore feature, disposed relative to the distal end the nozzle body, fluidly connected to the bore and located distally relative to the bore. At least one of the bore or the counter bore feature has a non-circular cross-sectional shape in a plane perpendicular to the longitudinal axis. The non-circular cross-sectional shape is configured to enable a second non-circular cross-sectional shape in the plasma arc that diffuses the plasma arc.

IPC 8 full level

H05H 1/34 (2006.01)

CPC (source: EP US)

H05H 1/34 (2013.01 - EP US); **H05H 1/3457** (2021.05 - EP); **H05H 1/3463** (2021.05 - EP)

Citation (search report)

- [XA] WO 2014025541 A1 20140213 - HYPERTHERM INC [US]
- [XA] US 2014284312 A1 20140925 - CHEN CAREY [US], et al
- [A] JP S60234919 A 19851121 - HONDA MOTOR CO LTD
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- [A] GB 845410 A 19600824 - UNION CARBIDE CORP

Designated contracting state (EPC)

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