

Title (en)
IMPROVED NOZZLE FOR A PLASMA ARC TORCH.

Title (de)
VERBESSERTE DÜSE FÜR PLASMALICHTBOGENBRENNER.

Title (fr)
AJUTAGE PERFECTIONNE POUR TORCHE A ARC DE PLASMA.

Publication
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Application
EP 90911719 A 19900720

Priority
• US 9004112 W 19900720
• US 42467589 A 19891020

Abstract (en)
[origin: WO9105629A1] A plasma arc torch mounts an electrode (14) and a nozzle (12) with a mutual spacing, symmetrically about a common longitudinal axis (40) at one end of the torch (10) adjacent a workpiece. The inner surface (26) of the nozzle (12) has an annular, inwardly-directed projection (28) located opposite the electrode (14) and at a point of closest spacing between the electrode (14) and the nozzle (12). The projection, or "angle kink" (28), is characterized by a minimum radius of curvature as compared to the radii of curvature of adjacent portions of the nozzle (12) opposite said electrode (14). The inner surface (26) is adjacent a central exit passage (44) of the nozzle (12) and the angle kink (28) is spaced from the intersection of the exit port (44) and the inner nozzle (26). In the preferred form the interior nozzle surface (26) is formed by two conical surfaces each having different slopes with respect to the longitudinal axis (40) so as to form the circumferentially extending angle kink (28) at their plane of intersection.

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